

# **Exhibit A**



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## **I. CREDENTIALS**

My name is Kevin M. Murphy. I am the George J. Stigler Distinguished Service Professor of Economics in the Booth School of Business and the Department of Economics at The University of Chicago, where I have taught since 1983.

I earned a doctorate degree in economics from The University of Chicago in 1986. I received my bachelor's degree, also in economics, from the University of California, Los Angeles, in 1981.

At The University of Chicago, I teach economics in both the Booth School of Business and the Department of Economics. I teach graduate level courses in microeconomics, price theory, empirical labor economics, and sports analytics. In these courses, I cover a wide range of topics, including the incentives that motivate firms and individuals, the operation of markets, the determinants of market prices, and the impacts of regulation and the legal system. Most of my teaching focuses on two things: how to use the tools of economics to understand the behavior of individuals, firms and markets and how to apply economic analysis to data. My focus in both research and teaching has been on integrating economic principles and empirical analysis.

I have authored or co-authored more than 65 articles in a variety of areas in economics. Those articles have been published in leading scholarly and professional journals, including the American Economic Review, the Journal of Law and Economics, and the Journal of Political Economy.

I am a Fellow of the Econometric Society and a member of the American Academy of Arts and Sciences. In 1997, I was awarded the John Bates Clark Medal, which the American Economic Association awarded once every two years to an outstanding American economist under the age of forty.<sup>1</sup> In 2005, I was named a MacArthur Fellow, an award that provides a five-year fellowship to individuals who show exceptional merit and promise for continued and enhanced creative work.

In addition to my position at The University of Chicago, I am also a Senior Consultant to Charles River Associates ("CRA"), a consulting firm that specializes in the application of

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<sup>1</sup> The John Bates Clark Medal was awarded biennially until 2009, but it now is awarded annually. *See* <[http://www.aeaweb.org/honors awards/clark medal.php](http://www.aeaweb.org/honors_awards/clark_medal.php)> (accessed May 27, 2015).

economics to law and regulatory matters. I have consulted on a variety of intellectual property, antitrust, fraud, and other matters involving economic and legal issues, such as damages, class certification, labor practices, exclusionary access, tying, mergers, price fixing, price discrimination, and joint ventures.

I have submitted testimony in Federal Court, the U.S. Senate, and to state regulatory bodies, and I have submitted expert reports in numerous cases. I have testified on behalf of the U.S. Federal Trade Commission and I have consulted for the U.S. Department of Justice. A list of the testimony I have given over the past four years is provided in my CV, attached as Appendix A. CRA charges \$1,300 per hour for my time spent on this matter, and I receive compensation from CRA based on its total billings in this case.

My opinions are based on the information available to me as of the date of this report. The materials that I have relied upon in forming the opinions I offer in this report are identified in Appendix B. My work is on-going, and I will continue to collect data and other information relevant to the issues and opinions that I discuss in this report. I will review, evaluate, and analyze any relevant material that becomes available to me, and I will supplement my report as necessary to reflect this information.

## **II. ASSIGNMENT AND SUMMARY OF OPINIONS**

I have been asked by Counsel for Allstate Insurance Company (“Allstate”) to perform an economic analysis to evaluate whether Allstate had a reasonable economic justification for restructuring its agent sales force in late 1999 and (with limited exceptions) requiring employee agents operating under its two major employment agreements to be independent contractors rather than employee agents.<sup>2</sup> In November 1999, Allstate announced a reorganization plan

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<sup>2</sup> I understand that there were limited geographic and other exceptions to Allstate’s policy of terminating employee agents with these two forms of contract (the R830 and R1500 employment agreements) but, for the vast majority of its US agents, Allstate eliminated its employee agent option effective June 2000. (*See, Allstate’s Responses to Plaintiffs’ Second Amended Statement of Undisputed Facts in Support of their Motion for Summary Judgment on the Release* (June 11, 2013), at 201-209.); *Allstate’s Statement of Undisputed Facts in Support of its Motion for Summary Judgment on the Validity and Enforceability of the Release and its Motion for Summary Judgment on the EEOC’s Complaint*, 4/8/2013 at ¶48 (“With limited exceptions, Allstate terminated the employment contracts of all R830 and R1500 employee agents effective no later than June 30, 2000”).

under which it was terminating the employment contracts of its approximately 6,200 Allstate employee agents effective June 2000,<sup>3</sup> and offering them an opportunity to convert to the same independent contractor status under which all Allstate agents hired by the company since 1990 operated. The “Preparing for the Future Group Reorganization Program” was adopted by Allstate in conjunction with a broader change in the company’s distribution strategy to respond to changes in the insurance marketplace such as the increasing success of internet-based rivals like GEICO and Progressive, and to enable the company to better compete with firms such as State Farm and Nationwide that already had adopted an independent contractor model.<sup>4</sup>

Based on the analysis that I describe in this report, I have concluded that Allstate had a reasonable economic justification to eliminate its employee agent programs and move to an exclusively independent contractor model. Doing so could be expected to better align agents’ incentives with Allstate’s objectives by providing agents with a greater financial stake in the business they generated. In particular, unlike employee agents, exclusive agents obtained an economic interest in the book of business that they built, and could sell their interest when they decided to retire or stop selling Allstate insurance.<sup>5</sup> This created a stronger incentive for agents to take a long-term view of spending on their operations (offices, staff, etc.) and their approach toward customer acquisition and retention, and better aligned their incentives with Allstate’s objectives. This continued the historical evolution of Allstate’s business model to increase agents’ control over their operations and to reward them when their efforts resulted in success for themselves and for Allstate.

The major conclusions that I offer in this report are:

- Long before it implemented the “Preparing for the Future” program, Allstate had been moving toward providing its agents with increased discretion over their

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<sup>3</sup> EEOC vs. Allstate Ins. Co, Memorandum in Support of Defendants’ Motion for Summary Judgment, December 7, 2005 at 5.

<sup>4</sup> ARI155870-928 (Liddy P-376) at -875-877. *See also* “Exclusive Agents Feel the Squeeze” (<http://www.insurancejournal.com/magazines/coverstory/2003/02/10/26235.htm>) (“for State Farm, the IRS classifies their agents as independent contractors”). *See also* AF 053572-619 (Hutton Dep. Ex. 65) at -589, a 1997 Allstate presentation that states “Many other high-performing [sic] sales organization [sic] leverage EA-like contracts (State Farm, AEFA, NWML, Nationwide, Farmers, American Family).”

<sup>5</sup> All Allstate agents historically were “exclusive agents” that sold only Allstate insurance and did not offer other companies’ insurance. However, Allstate uses the term “exclusive agent” to refer to its independent contractor agents and distinguish them from employee agents. I have adopted the same usage in my report.

operations, and had restructured its relationship with agents to better align agents' incentives with Allstate's objectives in light of their increased discretion.

- Allstate's competitors that used captive agents generally relied on independent contractors rather than employee agents, suggesting that Allstate's move to do the same enhances efficiency.
- Empirical evidence of agent performance before Allstate introduced the "Preparing for the Future" program indicates that Allstate agents who were independent contractors (referred to by Allstate as "exclusive agents") generally outperformed employee agents with comparable years of experience as an Allstate agent, and thus that adopting the Exclusive Agent program as the single contract for Allstate agents would be beneficial for Allstate.

I explain the basis for these opinions in the remainder of my report.

### **III. BACKGROUND**

Since its origins in the early 1930s, Allstate had been moving toward granting its agents greater discretion over how they operate and providing them with an increased financial stake in the business that they generate. The following review of the history of Allstate's agent relationships demonstrates that restructuring its agent sales force in late 1999 and requiring all of its agents to be independent contractors rather than employee agents continued a decades-long trend to provide agents with greater discretion.

#### **A. Early Years**

Allstate Insurance Company was formed by Sears on April 17, 1931. Sears fully divested all of its shares in Allstate by 1995.<sup>6</sup> The "Allstate" brand originally was used for automobile tires and other automobile parts before being adopted for Sears' auto insurance company.<sup>7</sup>

Sears originally offered Allstate auto insurance through direct mail and then through sales booths using employee agents.<sup>8</sup> At first, these agents were paid only a salary, but by 1940 they

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<sup>6</sup> "Allstate: 1926-1995 (Sears' divestment)" (<http://www.searsarchives.com/brands/allstate.htm>).

<sup>7</sup> *Ibid.*

<sup>8</sup> *Ibid.* See also ARI180095-113 (Hutton Dep. Ex. 64) at -099.

were being compensated with a combination of salary and commission.<sup>9</sup> As employees, agents did not have an economic interest in the book of business that they wrote and serviced.

Over time, Allstate's insurance lines expanded beyond auto insurance to include other personal lines of insurance, such as life and homeowner's insurance. During the 1950s and 1960s, Sears began selling Allstate insurance from other company-owned or leased locations in addition to selling from Sears stores. Those other locations generally housed several agents.<sup>10</sup> At the time, Allstate agents often received sales leads from the traffic that Sears stores generated and/or from Sears customer lists.

By 1960, Allstate had several different categories of agents, defined by where the agent was located (e.g., Sears store, branch office or other retail location, or company-owned or leased offices) and/or size of book. All agents were employees of Allstate.<sup>11</sup>

### **B. Late 1960s-Early 1980s**

In 1967, Allstate introduced the R830 agent employment agreement, which spelled out the agents' compensation schedule (commission rates) for different lines of insurance (auto, property, life, etc.).<sup>12</sup> From 1967 to 1984, all new and existing agents operated under this contract (and many agents continued to be covered by this agreement through the 1990s).<sup>13</sup>

Agents hired under the R830 Agreement started as retail agents in Sears stores, where Allstate paid the bulk of their expenses and provided customer leads.<sup>14</sup> Most agents eventually relocated to nearby offices owned or leased by Allstate and staffed by several agents. Initially, these were called Local Sales Offices and later they were limited in size and called Neighborhood Sales Offices.<sup>15</sup> Allstate managed these offices in much the same way it had

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<sup>9</sup> ARI180095-113 (Hutton Dep. Ex. 64) at -099.

<sup>10</sup> *Ibid.* at -099.

<sup>11</sup> *Ibid.* at -099.

<sup>12</sup> *Ibid.* at -099. *See also* ARI 020338-ARI 020348 (Hutton Dep. Ex. 4) for an example of a R830 agreement and Hutton Dep. 1/20/2003 33:5-10.

<sup>13</sup> ARI180095-113 (Hutton Dep. Ex. 64) at -099-100.

<sup>14</sup> *Ibid.* at -100.

<sup>15</sup> *Ibid.* at -100.



managed its larger non-store locations in the past, and agents had little discretion over these offices. Allstate was responsible for office location expenses, limited clerical support, supplies, etc., and for determining offices hours and locations.<sup>16</sup>

### **C. The Neighborhood Office Agent Program and the R1500 Contract**

Beginning in the late 1970s and continuing through the early 1980s, Allstate considered ways to change its agent distribution system in order to expand into new geographic areas (not located near Sears stores) and to reduce the company's expense ratio (ratio of expenses to premiums written).<sup>17</sup> The result was the development of Foundation For Growth in 1984, a program designed to "extend[] market reach, achiev[e] prominence as a low-cost operator, improv[e] competitive position and accelerat[e] growth" for Allstate.<sup>18</sup>

An outcome of Foundation For Growth was the Neighborhood Office Agent ("NOA") program. Effective October 1, 1984, all newly hired agents were required to be NOAs and to operate under a new contract—the R1500 contract—while existing agents could opt into the NOA program.<sup>19</sup> NOA agents had discretion over their office location, whether and who to have as office partners, and how much to invest in support staff.<sup>20</sup> Allstate gave NOA agents an Operating Expense Allowance ("OEA") based on the agent's sales production during the previous 12 months, but agents could spend more than this allowance if they found it in their interest to do so.<sup>21</sup> For example, agents could hire more support staff or obtain larger offices or offices in more expensive locations.<sup>22</sup> Expenditures that exceeded the OEA were not reimbursed

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<sup>16</sup> *Ibid.* at -100-101.

<sup>17</sup> *Ibid.* at -101.

<sup>18</sup> *Ibid.* at -101.

<sup>19</sup> *Ibid.* at -102.

<sup>20</sup> *Ibid.* at -101-102. *See also Neighborhood Office Agent Manual* (TK00506-539) (Hutton Dep. Ex. 47) at -506 ("You get the best of both worlds as an NOA – the experience of managing your own office, and initial financial assistance and guidance of the Allstate Insurance Company. The Allstate Neighborhood Office Agent Program allows agents, with Company guidance, to participate in the selection of their own office site, and to select clerical and solicitor assistance"); -526 ("you can choose your office partner(s) and participate in the selection of your office location, subject to Allstate Regional approval").

<sup>21</sup> TK00506-539 (Hutton Dep. Ex. 47) at -509 ("The Office Expense Allowance is calculated quarterly using the prior 12 months new and renewal business premium"); *see also* Hutton Dep. 1/22/2003 403:21-404:1.

<sup>22</sup> TK00506-539 (Hutton Dep. Ex. 47) at -511-512 ("Once you have exhausted your OEA funds you may incur some out of pocket expenses...As in any business, the amount you spend is left up to your discretion; consequently,

by Allstate, so agents had an incentive to spend beyond their OEA only if they expected to increase their commissions by selling more policies and/or better retaining existing customers. While NOA agents had greater responsibility for managing their agencies, they were still employees without an economic interest in their book of business.

#### **D. The Exclusive Agent Program**

In 1990, Allstate instituted the Exclusive Agent Independent Contractor Program (the “EA Program”), under which agents were independent contractors and operated under the R3001 exclusive agent contract.<sup>23</sup> All newly hired agents were required to participate in the EA program and were not offered the option to be employee agents after an initial training period.<sup>24</sup> Allstate’s existing agents could apply to join this program, or continue to work as employee agents under their R830 or R1500 agreement.<sup>25</sup>

EA agents, like agents in the NOA program, had discretion with respect to where their office was located, how and how much to invest in support staff, and so on.<sup>26</sup> Unlike agents in the NOA program, however, they were independent contractors and owned an economic interest in their book of business that they could sell to Allstate-approved buyers,<sup>27</sup> and they paid all business expenses out of their own pockets and were not reimbursed by Allstate.<sup>28</sup> Agents in the

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we strongly suggest that you establish a business plan with monthly quarterly and annual objectives. This will be of great assistance to you in staying on target in your new business writing efforts.”).

<sup>23</sup> ARI 180095-113 (Hutton Dep. Ex. 64) at -102-103 (“All new agents at Allstate either start as an EA trainee (R3000) for the 18-month employee (training) phase or purchase an existing EA’s book of business and become an EA independent contractor (R3001) immediately.”).

<sup>24</sup> ARI 180095-113 (Hutton Dep. Ex. 64) at -103.

<sup>25</sup> *Ibid.* at -103.

<sup>26</sup> I explain below why giving agents discretion over these decisions, and providing them incentives that align their incentives with Allstate’s with respect to these decisions, can be efficient, and how this provides an incentive for Allstate to move from employee agents to independent contractors.

<sup>27</sup> Devaney, D. Letter to Dixon, G. re Romero v. Allstate Insurance Company dated 5/15/00 (Hutton Dep. Ex. 58) at 3 (“Allstate owns all the business produced by the agents... [However,] the EA may sell the right to earn renewal commissions on the policies in his account to another qualified buyer or approved buyer. The EA’s agreement explicitly grants him this economic interest”).

<sup>28</sup> ARI 180095-113 (Hutton Dep. Ex. 64) at -102.

EA program received higher renewal commission rates than did employee agents, but were not part of Allstate's employee benefits program.<sup>29</sup>

Over time, Allstate's distributional channel had become diverse and organizationally complex. As of March 1997, 4,791 of Allstate's 13,968 agents were in the EA program,<sup>30</sup> and 8,204 were employee agents and participants in the NOA program.<sup>31</sup> In addition, Allstate had some retail agents operating out of Sears' stores, some employees operating from neighborhood sales offices that were provided by Allstate, and some general agents.<sup>32</sup> As I describe later, one concern when Allstate developed the Preparing for the Future program was the complexity of operating so many different agent programs with different commission rates and other provisions, particularly when Allstate had decided to add the Internet and call centers as additional ways to reach customers.

#### **E. The IRS and Changes to the NOA Program**

In the mid-1990s, the IRS investigated Allstate's NOA program after some Allstate NOA agents challenged the NOA program in Tax Court, contending that they were independent contractors rather than employees for purposes of filing tax returns.<sup>33</sup> The IRS threatened to reclassify all NOA agents as independent contractors, in part because NOA agents had flexibility to make additional expenditures (beyond those reimbursed by Allstate) on office and other expenses.<sup>34</sup> Allstate considered how to respond to the IRS's concerns.<sup>35</sup> It dismissed an IRS proposal to reclassify all NOA agents as independent contractors due to concerns that, if it did so, those agents would not have qualified for tax-advantaged benefits programs in the future, and

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<sup>29</sup> *Ibid.* at -102; see also *Allstate's Statement of Undisputed Facts in Support of its Motion for Summary Judgment on the Validity and Enforceability of the Release and its Motion for Summary Judgment on the EEOC's Complaint*, 4/8/2013 at ¶24 ("the renewal commissions payable to EAs were greater than the commissions payable to R830 and R1500 agents.").

<sup>30</sup> ARI 180095-113 (Hutton Dep. Ex. 64) at -103. Of these, 1,209 were in the EA Employee/Trainee (R3000) program where they were temporarily employees.

<sup>31</sup> *Ibid.* at -103.

<sup>32</sup> *Ibid.* at -103.

<sup>33</sup> Affidavit of Barry L. Hutton, June 9, 2000 (Hutton Dep. Ex. 3) at 5.

<sup>34</sup> See e.g., Hutton Dep. 7/17/2012 at 161:1-6 and 163:3-165:11.

<sup>35</sup> ARI 006487-514 (Hutton Dep. Ex. 19) at -489.

Allstate's benefits programs might have been reclassified retroactively to require Allstate and its employees – not only agents but all employees – to pay back taxes on these benefits.<sup>36</sup>

Allstate and the IRS ultimately reached an agreement under which agents in the NOA program continued to be classified as employees, and thus remained eligible for tax-advantaged benefits programs. As part of this agreement, Allstate agreed to make several important changes to the NOA program that limited agents' flexibility.<sup>37</sup> For example, agents were now prohibited from spending beyond their OEA on office space and support staff.<sup>38</sup> These restrictions took effect on January 1, 1999.

## **F. The Preparing for the Future Program**

How best to align agents' incentives with companies' objectives is a classic problem in incentive theory. Since 1990, Allstate had hired new agents only as independent contractors and not as employees,<sup>39</sup> which is evidence that Allstate had determined by 1990 that contracting with new agents as independent contractors rather than as employees was in the company's business interest.<sup>40</sup> Allstate subsequently compared the performance of its independent contractors and employee agents to investigate whether and why independent contractors were more productive than employee agents.<sup>41</sup>

In the aftermath of the negotiations and agreement with the IRS over the NOA program, and in the context of a broader strategic review, Allstate reconsidered the role of its agents and

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<sup>36</sup> Hutton Dep. 7/17/12 157:16-161:10; 172:23-173:11; ARI 180095-113 (Hutton Dep. Ex. 64) at -109-110.

<sup>37</sup> ARI 004474-488 (Hutton Dep. Ex. 52) at -485.

<sup>38</sup> ARI 004503-515 (Hutton Dep. Ex. 50) at -503 (“no NOA will be allowed to incur expenses for office rent and support staff that exceed the agent’s Office Expense Allowance”).

<sup>39</sup> Allstate hired some new agents under the R3000 agreement, which was an employee contract that generally lasted no more than 18 months, after which agents who remained with Allstate were expected to transition to the EA program as independent contractors.

<sup>40</sup> In a June 1996 document, Allstate concluded that “NEAs have the highest productivity. Even newly hired NEAs, with limited tenure, have higher productivity levels than established NOAs” (ARI18488-501 (Hutton Dep. Ex. 31) at -491) and “The NEA program appears successful with production levels exceeding other contract types. This results from newly hired agents and the conversion of some of our best NOA agents” (*ibid.* at -497). By 1999, more than half of Allstate agents were part of Allstate’s exclusive agent program, and Allstate was referring to this program as its “premier program” (ARI 155870-928 (Liddy P-376) at -906).

<sup>41</sup> See ARI18488-501 (Hutton Dep. Ex. 31) for such a review (e.g., “How Does New Business Productivity Vary by Contract?” (-491) and “Support Staff Contributes Greatly to Productivity” (-492)).

evaluated whether agent productivity would be higher if it organized its agent force as employees or independent contractors.<sup>42</sup> It compared the change in policies per agent and premiums per agent for employee agents in the NOA program with those of exclusive agents between September 1998 and September 1999, dates that bracket the changes to the NOA program following from the IRS agreement that took effect in January 1999. Allstate found that, between those dates, average policies and premiums per agent declined by 4.7% and 4.5%, respectively, for employee agents who were part of the NOA program, but increased by 2.3% and 1.5%, respectively, for EA agents (who were not directly affected by changes to the NOA program).<sup>43</sup>

Allstate's analysis of agent conduct after the changes to the NOA program that followed the IRS agreement suggests that changes in the NOA program made it less attractive to many agents as well. Allstate's internal analysis found that employee agent conversions to the EA program spiked after the changes in the NOA program took effect in January 1999. During the first six months of 1999, 1,117 NOA agents converted to EA status (724 in February alone), compared to 106 and 117 in the first six months of 1997 and 1998, respectively, a ten-fold increase in the conversion rate.<sup>44</sup> This sharp increase in conversions is what economics predicts would occur if changes in the NOA program made it less attractive to agents – agents would seek to convert to other organizational arrangements that gave them greater discretion and thereby a greater chance to succeed.

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<sup>42</sup> ARI 000621-ARI 000656 (Hutton Dep. Ex. 25) is a presentation to the Channel Integration Group, a group that was organized to consider changes to Allstate's business model, including moving to a single agent sales program (*see* Hutton Dep., 1/21/03, at 201). *See also* ARI155870-928 (Liddy P-376) at -875-876 ("We are a strong captive player, but not positioned in the faster growing, direct channels...which could command up to 18-30% market share in the future"); *ibid.* at -877 ("Traditional insurers are larger, but companies like Progressive and GEICO that access these new channels are growing faster and taking share"); ARI000109-125 (Hutton Dep. Ex. 28) at -111 ("Strategy – Transforming the Allstate Brand into an integrated multi-channel sales and service business model to substantially improve market share and sustainable profitability"); *ibid.* at -113 ("Seamlessly Integrate the 'Local Presence' Agency System with our New Multi-Access Business Mode." (emphasis omitted)); ARI 8200-277 (Hutton Dep. Ex. 73) ("Achieving Growth Aspiration Through Multi-Access Models"); ARI 109406-437 (Hutton Dep. Ex. 61) at -407 ("the intent is to have the customer select an agent at the point of sale [direct Internet and 800-number access]"); *ibid.* at -428 ("This model enables [Allstate] to provide the same products, services and prices, no matter which way the customer prefers to be served"); Declaration of Barry L. Hutton 6/9/2000 ¶15; ARI 000040-66 (Hutton Dep. Ex. 80).

<sup>43</sup> ARI 155870-928 (P-376) at -908 ("Exclusive Agents substantially outperform employee agents since IRS modifications were enacted").

<sup>44</sup> AF 000879 (P-409). *See also* Liddy Testimony 6/15/2015 at 93:3-94:6.

Allstate concluded that the performance of employee agents working under NOA arrangements suffered as a consequence of new restrictions required by the agreement with the IRS.<sup>45</sup> In addition, Allstate was concerned about administrative complexity: it had many different agency programs and different compensation structures for agents.<sup>46</sup> Internal Allstate assessments found that this complexity made it difficult to introduce and price new products.<sup>47</sup>

Following internal study and evaluation, and in conjunction with changes to its broader channel and cost-reduction strategy,<sup>48</sup> Allstate announced the “Preparing for the Future Program” in November 1999.<sup>49</sup> An important element of this program was that Allstate would no longer

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<sup>45</sup> ARI000319-340 (Hutton Dep. Ex. 37) at -328 (“...clearly, the restrictions imposed on employee agent programs since the IRS agreement are not helping NOAs become more successful”). *See also* ARI 155870-928 (Liddy P-376) at -908 (“EA’s are more productive than NOA’s – 15% higher policies/agent; 9% greater average premiums/agent”).

<sup>46</sup> ARI 000109-125 (Hutton Dep. Ex. 28) at -114 (“58% of our agents are currently in the Exclusive Agency Program...The remaining 42% of the agents are in a myriad of employee programs, the “Neighborhood Office Agent” being the predominant employee program”); -115 (“Currently, we have 10 different Employee Agent programs with different compensation schedules and/or expense reimbursement arrangements”); -118 (“Multiple Contracts and Programs are Expensive to Administer, Support and Manage”); ARI 017661 (Hutton Dep. Ex. 30) (“We can not (sic) continue to maintain five different captive agent programs including six versions of the NOA program if we are going to effectively compete in the marketplace.”).

<sup>47</sup> Hutton Dep. 7/18/2012 at 690:21-691:16 (“we went to a single agent contract because of the complexity of our old programs, taken altogether – I don’t remember the number now, but the various contracts and the various programs. And it was inefficient. It made it very difficult for the company to be nimble in product changes and pricing changes, the various things that we had to figure out how in the world to do it and if it’s new products, how do we pay all these different kinds of agent groups. We couldn’t be quick enough in the marketplace and efficient enough to support them, not to mention that managers had to one day talk as if they were talking to an independent contractor and another day talk as if they were an employee with this set of date commission rates and another date this set of commission rates. It just wasn’t efficient.”). *See also* ARI 109406-437 (Hutton Dep. Ex. 61) at -413 (“With a single exclusive agency program, Allstate can offer more options to agents, which will allow for greater flexibility and responsiveness to meet market changes and consumer demands. The direct-access program is a good example of this increased flexibility. Under the old, multi-agreement agency system, it would have been more difficult to develop a payment system to pay agents for their direct-access customers.”).

<sup>48</sup> ARI 001069-ARI 001089 (Hutton Dep. Ex. 29) at -071 (“Allstate Corporation Expense Reduction Initiative – Plan Summary: The company plans to announce a series of strategic initiatives designed to aggressively expand its selling and service capabilities...the company identified a number of specific areas where operational efficiencies can be realized...savings generated from the expense reduction plan will be used to fund key growth initiatives...What is expected to evolve is a stronger organization...strategy is expected to enable the company to build on its core competencies while maintaining alignment with the agents to serve our customers better than our competitors.”).

<sup>49</sup> Declaration of Barry Hutton in Support of Defendant Allstate’s Motion for Summary Judgment, August 20, 2002 (“Hutton 2002 Declaration”) at ¶16. *See also* ARI 000795-860 (Hutton Dep. Ex. 35) at -802.

sell through employee agents, but only through agents that were part of the EA program.<sup>50</sup> Allstate provided employee agents with information about their options under the program.<sup>51</sup> Allstate announced that all existing employee agent contracts would be terminated as of June 30, 2000, and it offered all existing employee agents the option to convert to the EA program.<sup>52</sup> Agents who converted would receive at least a \$5,000 bonus and, two years after converting, would receive a financial interest in the book of business that they had built as employee agents.<sup>53</sup>

Employee agents who chose not to become Exclusive Agents were given three options. They could temporarily convert to an EA agreement, receive an economic interest in the book of business they built as an employee agent after as little as one month, and then sell this interest to an approved buyer by August 1, 2000. Alternatively, they could receive an enhanced severance package (providing for one year of pay) or a severance package providing for up to 13 weeks of pay. Agents who chose one of the first two options had to sign a release of claims. Agents who did not sign the release received severance under the third option.<sup>54</sup>

#### **IV. ALLSTATE'S CONVERSION OF EMPLOYEE AGENTS TO INDEPENDENT CONTRACTORS IS CONSISTENT WITH AN INTEREST IN GROWING ITS BUSINESS EFFICIENTLY**

In this section of my report, I consider economic evidence regarding the impact of employee vs. independent contractor arrangements on the economic value that agents bring to Allstate and earn themselves. I begin by explaining why, as a matter of economic theory, the independent contractor relationship that provides agents with an economic interest in their business provides incentives for agents to grow their business by organizing their offices efficiently and investing in order to grow their business in ways profitable to Allstate and themselves. I then present marketplace evidence that the independent contractor arrangement

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<sup>50</sup> ARI 000795-860 (Hutton Dep. Ex. 35) at -802.

<sup>51</sup> ARI 000795-860 (Hutton Dep. Ex. 35).

<sup>52</sup> ARI 000795-860 (Hutton Dep. Ex. 35) at -802.

<sup>53</sup> ARI 000795-860 (Hutton Dep. Ex. 35) at -802. Historically, there had been a five-year wait for employee agents who converted to the EA program (*see* Hutton 2002 Declaration ¶19).

<sup>54</sup> Hutton 2002 Declaration ¶¶17-24.



was preferred by Allstate and its competitors before Allstate decided to eliminate the employee agent contract. In the following section, I provide empirical evidence that, prior to November 1999 (when Allstate announced it would eliminate the employee agent contract), EAs outperformed employee agents on several measures. Thus, Allstate reasonably could have concluded that the EA contract form was preferred if it wanted a single type of agent contract.

**A. Using Independent Contractors Creates Efficiencies by Aligning Agents' Incentives with Allstate's Objectives**

**1. Exclusive Agents' Economic Interest in their Book of Business Provides an Incentive for Them to Build a Strong Book of Business**

A key difference between Allstate's Exclusive Agents and employee agents is that Exclusive Agents have an economic interest in their book of business that they can sell, but employee agents do not. Exclusive Agents have "residual claims" on their book that provide them with incentives to increase its value, because they can appropriate the benefits from doing so when the business is sold.<sup>55</sup> Exclusive Agents thus have a strong incentive to develop this book of business by attracting more, and higher-quality, clients and maintaining close client relationships. Exclusive Agents' incentives to do so derive not only from commissions, but also because doing so increases the value of their book, which they can realize when they sell their interest in the book of business. While employee agents' commissions increase as their book increases, they do not internalize the future value of building such a book to the same extent because they are not residual claimants. It is in Allstate's interest that agents build strong books, because this leads to more profitable new and renewal sales. Moving to independent contractors from employee agents thus increases the alignment of Allstate's agents' incentives with Allstate's objectives with respect to agents' efforts to build strong books of business.

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<sup>55</sup> See Eugene F. Fama and Michael C. Jensen, "Separation of Ownership and Control," 26 *Journal of Law and Economics* 301 (1983) for a discussion of residual claims and incentives in the context of corporate control.



## **2. Allstate's Exclusive Agents Had More Discretion Over Their Business Than Did Allstate's Employee Agents, Which Benefited Allstate**

By the late 1990s, the vast majority of Allstate's policies was sold and serviced by agents based in small, neighborhood offices.<sup>56</sup> Agents are better able to sell new policies and provide service to existing customers when these offices are well-located and are staffed to reflect the local demands these agents faced.<sup>57</sup> Well-located offices make it easy for customers who are interested in buying insurance or obtaining service for existing policies to meet with agents or their staff. Well-staffed offices enable agents to be responsive to new business opportunities and serve existing customers efficiently, which leads in turn to greater sales of Allstate insurance and higher customer retention rates.

One would expect the efficient staffing of offices to vary across locations. Although only licensed agents can sell insurance (in the sense of being party to contracts between the insurer and policyholders), other staff can support licensed agents. Economics predicts that the efficient number and type of support staff varies with customers' requirements and with how agents choose to operate. For example, an agent with an office located in a growing area with lots of good prospects for selling new policies might choose to employ solicitors to help win new business, while an office with many existing policy-holders but limited prospects for new sales might find it more efficient to hire staff to help service existing accounts rather than solicit new business.

Giving agents discretion over how to run their offices takes advantage of agents' local knowledge, and potentially allows offices to be located and staffed more efficiently than if Allstate's management made these decisions.<sup>58</sup> Agents who work out of neighborhood locations can have an informational advantage relative to individuals who do not in understanding the

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<sup>56</sup> In a November 1999 presentation, Allstate reported that 5,841 agents were NOAs and 6,796 agents were EAs. (ARI 000109-125 (Hutton Dep. Ex. 28) at -115).

<sup>57</sup> Internal Allstate analysis during the 1990s showed that Allstate considered staffing levels important for agent productivity ("Support Staff Contributes Greatly to Productivity") and was concerned that staffing levels at NOAs were lower than those at EAs ("The number of support staff for NOAs is lower [than at EAs] and represents an opportunity for improving productivity."). See ARI 18488-501 (Hutton Dep. Ex. 31) at -492.

<sup>58</sup> This is a specific version of a long-standing principle in organizational economics: an advantage of giving agents discretion is that agents may have access to local information that the principal (e.g., a headquarters) does not. See, for example, Ricardo Alonso, Wouter Dessein, and Niko Matouschek, "When Does Coordination Require Centralization?" 98 *American Economic Review* 145 (2008).

demands of local customers and the prospects for new business in these areas because they are close to these demands, often as part of the community. Neighborhood agents are well-situated to decide where to locate their office and how much and what kind of staff support they should have. I would expect this information advantage to be greater for Allstate in the 1990s than in the past when Allstate agents relied partly on Sears' other businesses for lead generation, and thus Allstate's agents' leads depended less on their own knowledge of their local area.

Changes in the NOA program following the IRS agreement would reduce NOA agents' ability to grow and support their business because they now were limited in what they could spend. In contrast, EA agents had discretion over how much to spend on offices and staffing. Allstate concluded in 1999 that, compared with NOA agents, exclusive agents had "more freedom and flexibility to operate their agencies" by hiring support staff directly and using any preferred staffing vendor (rather than securing support staff "through an approved staffing vendor"); having "complete discretion to determine level of business expenses" (rather than having certain expenses limited to the available OEA); and having "an economic interest in his/her book of business which aligns them with Company objectives," among other features.<sup>59</sup>

Agents' decisions about locating and staffing their offices will be made most efficiently when agents both bear the cost of bad decisions and reap the rewards of good decisions, which benefits both the agent and Allstate. Exclusive agents receive more of the incremental benefits from these decisions compared to employee agents because they not only receive commissions from incremental sales, but also have an economic interest in their book of business, and thus can appropriate some of the ongoing benefits from incremental increases in this book. They bear more of the incremental costs because they pay all business expenses themselves, while employee agents, particularly after the IRS agreement, did not.

It therefore follows that giving agents authority over staffing and location decisions is complementary to giving them incentives that more fully align their efforts to Allstate's

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<sup>59</sup> ARI 000109-125 (Hutton Dep. Ex. 28) at -116. *See also* ARI 109406-437 (Hutton Dep. Ex. 61) at -409 ("With all agents in the EA program, we can provide agents with some additional, dynamic opportunities for growth. For example, all EAs can open local agency extensions. Qualified EAs can buy other agents' books of business and open satellite agency locations.").

objectives.<sup>60</sup> Moving to a solely exclusive agent contract allowed Allstate to delegate location and staffing decisions to agents and exploit their local informational advantage by better aligning agents' incentives with those of Allstate.<sup>61</sup>

## **B. Marketplace Evidence of the Efficiency of Using Independent Contractors to Sell Insurance**

An economic test of whether a company's organizational structure reflects efficiency-related objectives is whether similarly situated competitors adopt the same or a similar structure. Evidence I reviewed suggests that exclusive use of independent contractor agents was a common practice for Allstate's competitors. As Allstate increasingly moved its sales force out of Sears stores and into small offices in local neighborhoods, its distribution approach more closely resembled that of its traditional property and casualty insurance competitors.<sup>62</sup> Firms such as State Farm, Nationwide, and Farmers long had sold insurance from small, neighborhood locations using exclusive agents that were independent contractors and had discretion and incentives with respect to how their agencies were located, staffed, and managed.<sup>63</sup> The fact that

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<sup>60</sup> Paul Milgrom and John Roberts describe the complementarity between discretion and incentives in their textbook on organizational economics (*Economics, Organization and Management* (1992)). See, e.g., "...allowing discretion creates more value for workers with intense incentives than for those with weak incentives." (at 412); "Decentralizing authority facilitates making good use of local information, but the very fact that decisions are based on information that is not available to headquarters exacerbates the moral hazard problem...Granting decision-making authority and assigning financial responsibility for outcomes to the same person are complementary actions" (at 549).

<sup>61</sup> This general organizational principle is manifested not only in this context but in other contexts as well. For example, Mitchell A. Petersen and Raghuram G. Rajan ("Does Distance Still Matter? The Information Revolution in Small Business Lending," 57 *J. of Finance* 2533 (2002)) provide evidence that explains why locally-owned banks historically have had an advantage for serving borrowers for whom there is little "hard information" upon which to assess credit risks. For additional examples of how this principle applies more broadly in banking and in other contexts, see Thomas N. Hubbard, "Affiliation, Information and Organization: Ownership Incentives and Industry Structure," 52 *J. of Industrial Economics* 201 (2004).

<sup>62</sup> "Exclusive agents (such as agents affiliated with Nationwide, State Farm, and Northwestern Mutual Life) often make significant capital and advertising investments to grow their businesses, but receive some subsidy from the carrier in exchange for their exclusive agreement to sell the carrier's products. In the USA and Europe, exclusive agency is more common than the employee sales model." James I Hilliard, Lauren Regan, and Sharon Tennyson, "Insurance Distribution," Chapter 25 of *Handbook of Insurance* (2013) 689-727 at 691.

<sup>63</sup> "State Farm has always maintained that its agents are independent contractors... Farmers agents have always been independent contractors" ("Exclusive Agents Feel the Squeeze," *Insurance Journal*, 2/10/2003 (<http://www.insurancejournal.com/magazines/coverstory/2003/02/10/26235.htm>). See also Testimony of Edward Liddy 6/15/2015 at 15:8-24, 84:10-16, 104:16-25.

competitors selling similar types of insurance in similar ways used independent contractors supports the hypothesis that doing so enhances efficiency.

The efficiency of using independent contractors also is indicated by Allstate's 1990 decision that all newly hired agents would be independent contractors (after a training period in which they were temporarily employees<sup>64</sup>) rather than employee agents. Thus, long before the "Preparing for the Future Program," Allstate had structured its relationship with new agents as independent contractors, not employees, indicating that it thought this contractual arrangement was more efficient.

### **C. Empirical Evidence Indicates that Allstate's Independent Contractors Were More Productive than Employee Agents**

As noted above, I have been asked to perform an economic analysis of whether Allstate had a business reason for restructuring its agent sales force in late 1999 and requiring all its agents (with limited exceptions) to be independent contractors rather than employee agents. As an economist, I interpret this question as whether Allstate had reason to expect, based on historical performance and its understanding of the industry, that all else equal its agent force would perform better (win and keep more and more profitable business) if Allstate structured its relationship with its agents as independent contractors rather than as employees.

In order to evaluate this question, I examined the historical data available to me on Allstate's agents' performance. Based on the analyses described below, I have concluded that evidence of comparative agent performance indicates that independent contractors were more productive than employee agents, and thus that Allstate had a reasonable economic justification for adopting its policy to require that agents remaining with Allstate become independent contractors.

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<sup>64</sup> See Allstate's Responses to Plaintiffs' Second Amended Statement of Undisputed Facts in Support of Their Motion for Summary Judgment on the Release, 6/11/2013 at ¶202 ("During the 18-month [trainee] period, R3000 Agents are full time employees of Allstate and will be trained and become acclimated to the culture and business practices of the Allstate Insurance Company, its subsidiaries and affiliates." (ARI 079713) and "The purpose of the job is to prepare the employee for the ownership of an Allstate Agency after eighteen months of mentoring, training, and active participation in the business acquisition process" (A025863)).

## 1. Data Description

I use two sets of data provided to me by Allstate in my empirical analysis. My primary data source is Allstate's Customer Satisfaction, Retention, and Profitability ("CSR") reports. I understand that these reports are part of a family of business reports that track performance measures of Allstate agents, and that these reports were and still are used by Allstate management to understand the performance of individual agents or groups of agents.

CSR reports contain a variety of annual performance measures of how much business an individual agent sold (total premiums, total policies in force, and total items in force in a given year). Each of these performance measures is broken down by type of insurance coverage including automobile, property, business insurance, and total casualty. For my empirical analysis I focus on total casualty, which measures the aggregate casualty business of an agent.<sup>65</sup> Allstate provided me with agent-level CSR reports from 1999 to 2003 for over 20,000 agents.<sup>66</sup> Each report provides data for both the current and prior year, so I was able to create a dataset with annual agent-level performance measures from 1998 through 2003.<sup>67</sup> CSR reports available to me were only for agents who were still with Allstate at the end of the calendar year, so these data do not contain performance measures for agents who leave Allstate during a calendar year.<sup>68</sup>

My other data source is Allstate's human resources database ("HRIS"). This database contains detailed compensation, demographic, and employment information on all Allstate agents, as well as others who work for Allstate. The records for an agent provide the agent's contract history from 1996 to 2004, years of experience as an Allstate agent, compensation measures from 1996 to 2004, and annual demographic information including geographic region from 1996 to 2004. I use HRIS employment information (including years of experience as an Allstate agent, geographic region of employment and employment contract) in my analysis.

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<sup>65</sup> Total casualty excludes sales of Allstate's financial products and life insurance.

<sup>66</sup> These reports were provided to me in htm and pdf formats, and my staff converted them into an electronic database.

<sup>67</sup> The 1998 data is conditional on an agent having a CSR report in 1999.

<sup>68</sup> As I explain below, much of my analysis assesses agents' performance in 1998, and relies on CSR reports generated at the end of 1999 (which provide performance data for both 1998 and 1999). My analysis therefore excludes agents who left Allstate during 1998 or 1999.

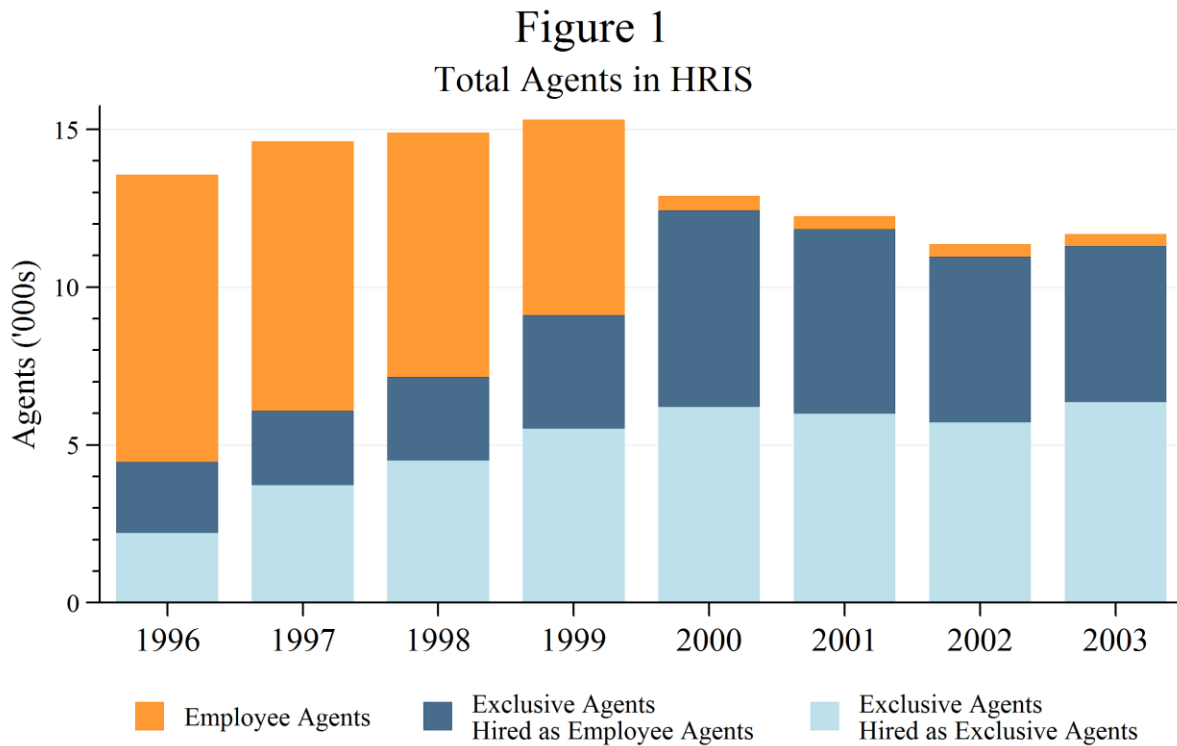
To construct the dataset used in the empirical analysis I describe below, I matched an agent's CSRP report in a year with that agent's HRIS data at the end of the same year. For each agent who has a CSRP report in a particular year, the dataset contains total premiums, policies, and items in force from CSRP, and years of experience as an Allstate agent, geographic region, and contract type from HRIS. Using the agent's years of experience and contract type, I classify agents in each year as either an employee agent (who had a R830 or R1500 employment agreement with Allstate), an exclusive agent hired as an employee agent (i.e., an exclusive agent who had been hired before 1990), or an exclusive agent hired as an exclusive agent (an exclusive agent who had been hired in or after 1990). In my empirical analysis, I restrict my analysis to active agents, and I exclude agents in New Jersey and Canada as well as joint underwriting agents.

## **2. Agent Distribution**

Figure 1 shows the number and composition of Allstate's agents who appear in the HRIS data from 1996 through 2003.<sup>69</sup> The total number of agents increases annually through 2000, falls sharply between 2000 and 2001, then gradually declines thereafter except for a slight increase in 2003. The number of employee agents (the yellow portion of the bars) declines gradually during the late 1990s and is close to zero after the Preparing for the Future Program in 2000. The dark blue bars represent individuals who had switched from being an employee agent to an exclusive agent during that year or previous years; the number of these agents increased gradually between 1996 and 1999 and then by a large amount in 2000 as a consequence of the Preparing for the Future Program. The number of exclusive agents hired after 1990 (when all hires were exclusive agents) increased in each year from 1996 to 2000 and then leveled off.

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<sup>69</sup> For Figure 1, I use data from HRIS because it contains data in 1996 and 1997. I do not use data from 2004 because I do not have CSRP data in that year.



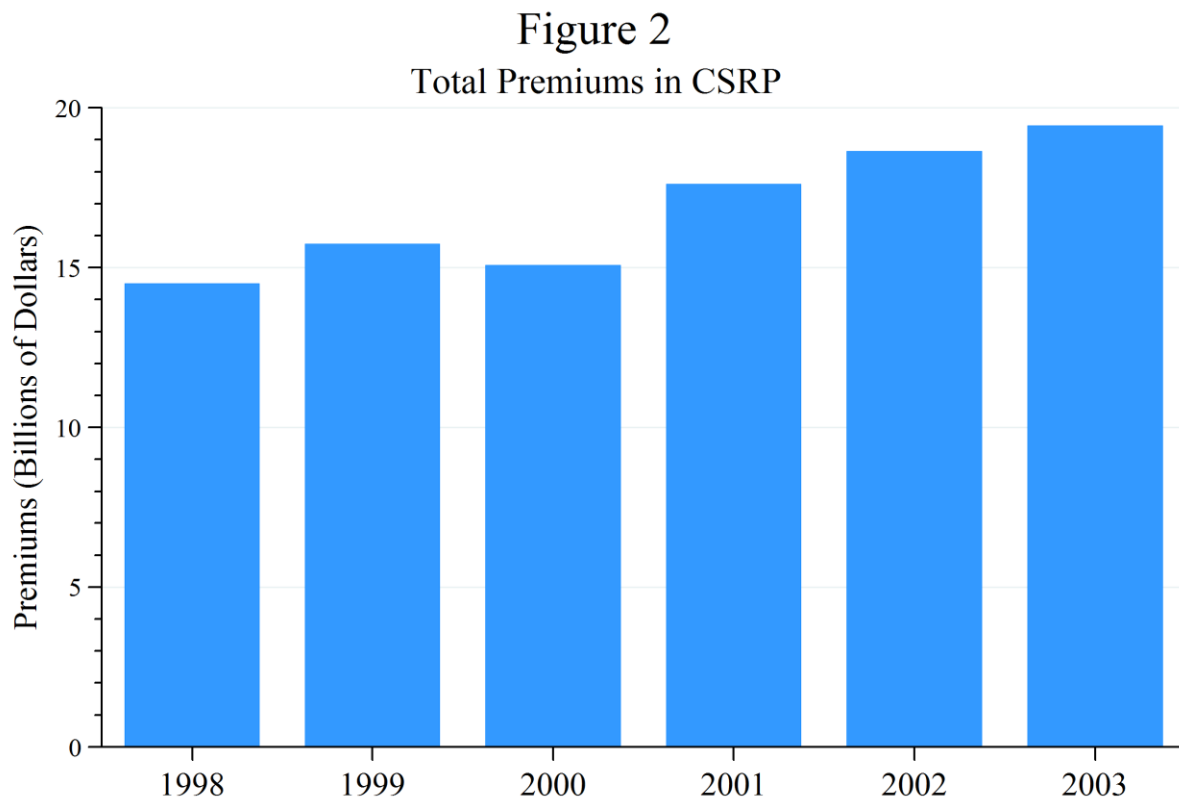
Notes:

[1] Restricted to active, non-JUA employee and exclusive agents who are not located in New Jersey or Canada.

[2] Agent counts are the number of agents who worked at Allstate at any point in the year.

Source: HRIS.

Figure 2 shows the total premiums sold by Allstate agents appearing in the CSRP data. Total premiums increased each year, except for a decline between 1999 and 2000, which is when Allstate implemented changes associated with the Preparing for the Future Program.

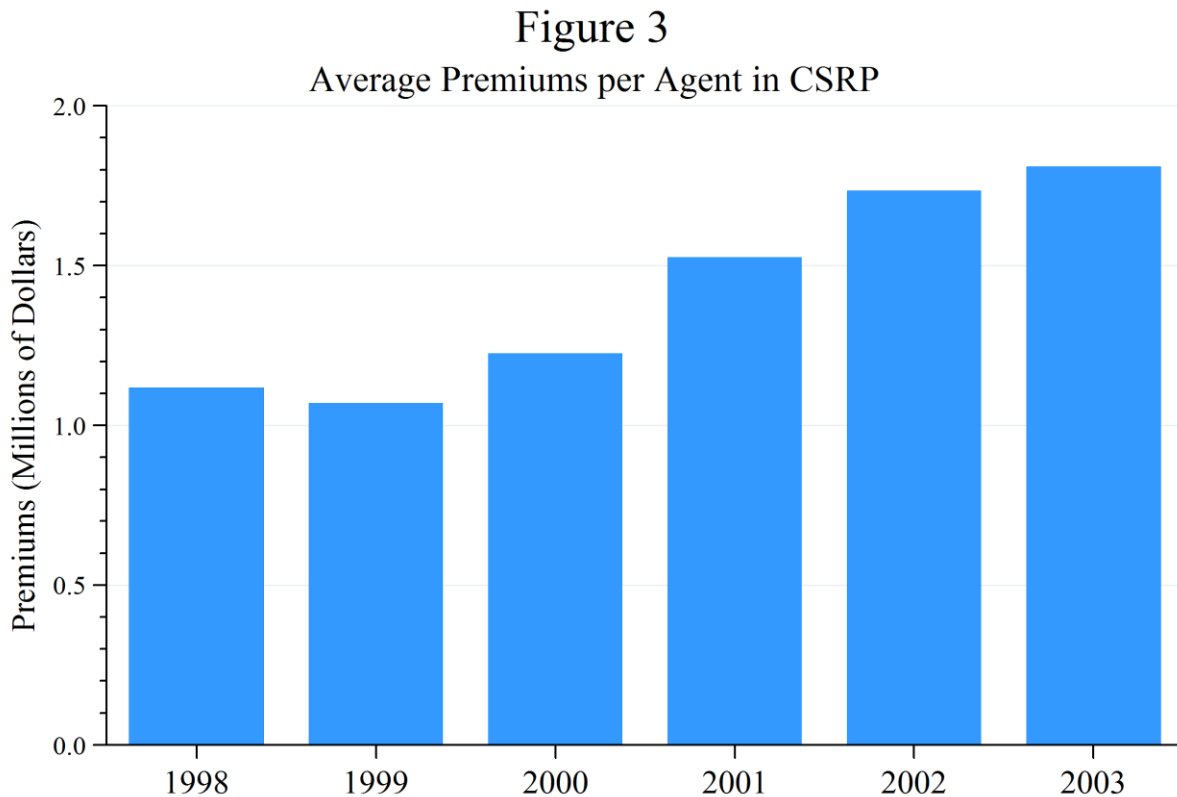


Note: Restricted to active, non-JUA employee and exclusive agents who are not located in New Jersey or Canada.

Sources: HRIS, CSRP.

Figure 3 shows average premiums per agent between 1998 and 2003. There was a small decline between 1998 and 1999 and then a steady increase during the following four years, the period during and after the Preparing for the Future Program was instituted.





Note: Restricted to active, non-JUA employee and exclusive agents who are not located in New Jersey or Canada.

Sources: HRIS, CSRP.

### **3. Independent Contractors Generate More Premiums on Average than Do Employee Agents with Comparable Experience**

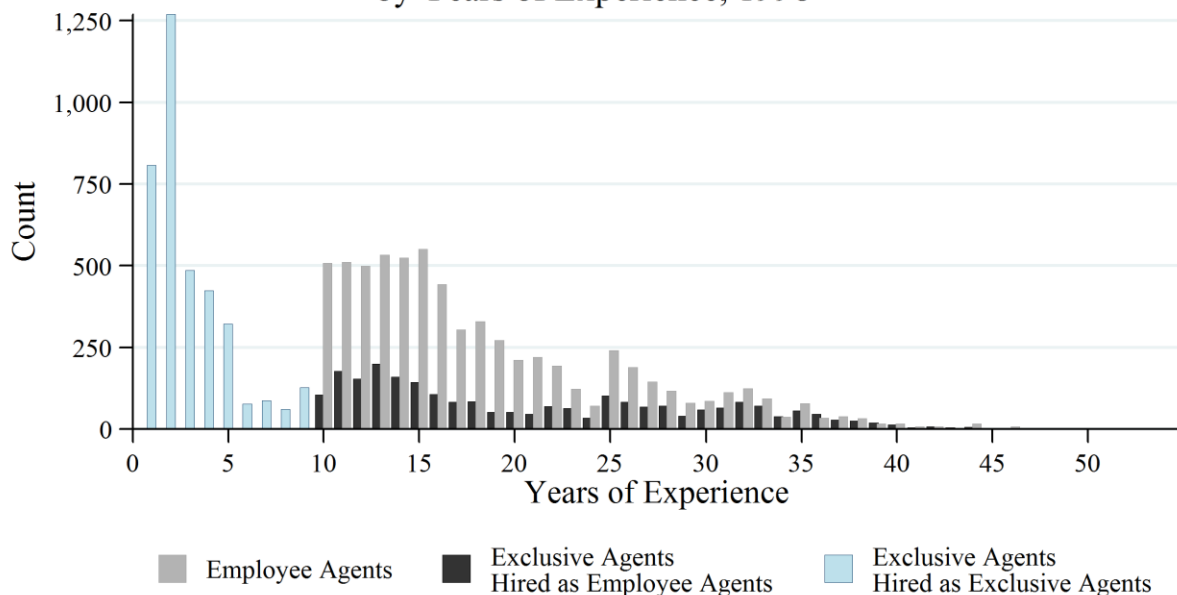
In this section, I compare the premiums generated by Allstate's exclusive agents and employee agents in 1998, the year that precedes organizational changes associated with both the IRS agreement and the Preparing for the Future Program. The purpose of my analysis is to understand whether evidence of agent performance is consistent with the view expressed in Allstate's internal documents that performance of exclusive agents generally was superior to that of employee agents.<sup>70</sup>

Figure 4 shows the distribution of Allstate agents in the 1998 data on which I base my analysis by years of experience and by whether agents were employees or independent

<sup>70</sup> ARI 155870-928 at -908 ("EA's are more productive than NOA's").

contractors.<sup>71</sup> As the figure shows, agents with 10-25 years of experience account for a large portion of the data. Therefore, my comparison of the performance of exclusive and employee agents primarily is driven by employees with 10-25 years of experience. All of these agents initially were hired as employee agents, and a significant majority remained employee agents as of 1998. However, the black bars indicate that a substantial share of those agents hired as employee agents converted and became exclusive agents by 1998.

**Figure 4**  
Count of Agents Observed in CSRP  
by Years of Experience, 1998



Notes:

[1] Experience is defined as 1998 - year became agent + 1.

[2] Agent classification is as of December 31, 1998.

[3] Restricted to active, non-JUA employee and exclusive agents who are not located in New Jersey or Canada.

Sources: HRIS, CSRP.

Figure 4 also shows that all of the agents with fewer than ten years of experience were hired as exclusive agents. While many had 2-5 years of experience in 1998, relatively few had 6-9 years of experience. The figure also shows that a relatively small share of agents had more

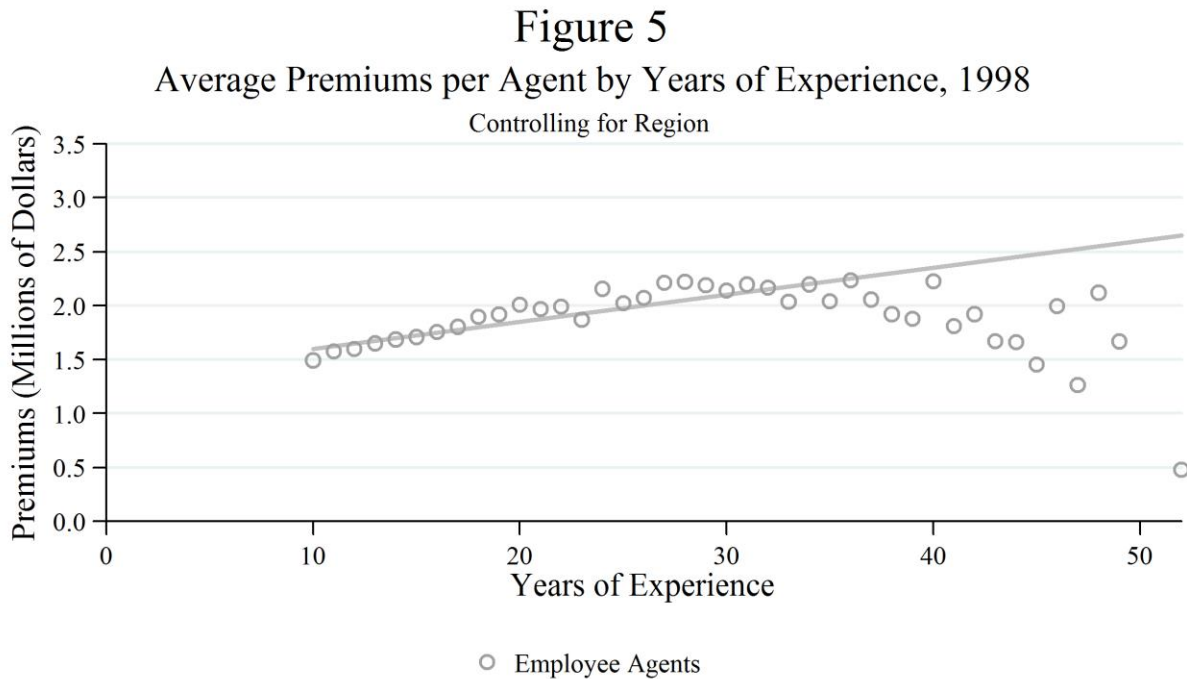
<sup>71</sup> In connection with settlement of two class-action lawsuits filed in California, Allstate discontinued its R830 and R1500 Agreements (and related employee programs) in 1996, and offered those agents the opportunity to convert to the R3001 Exclusive Agent Agreement. (See ARI 000189-202 (Hutton Dep. Ex. 18) at -189). I have done an alternative version of my analysis in which I exclude California agents, and my results (which are presented in Appendix C) are similar.

than 25, and a very small number had more than 35, years of experience. While my analysis of agent performance includes these agents, they will not affect my analysis much because there are so few of them.

Figure 5 reports average premiums per agent by years of experience for the employee agents in 1998. In this figure, each gray circle represents average premiums per agent among employee agents with a given number of years of experience.<sup>72</sup> For example, the left-most circle gives the average premiums among employee agents with 10 years of experience at Allstate. The pattern in Figure 5 shows that average premiums per agent increases as agents become more experienced until the agent has about 30-35 years of experience, and declines on average thereafter (although, as Figure 4 shows, relatively few agents in the data have more than 35 years of experience).

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<sup>72</sup> These averages normalize individual agents' performance by the sales region in which they work, to account for the fact that premiums per agent are systematically greater in some regions than others. In 1998, Allstate agents operated out of one of seventeen regions. With the exception of California and New York, these regions are organized as a collection of nearby states. California and New York are divided into two regions. Texas, Florida, and Illinois have their own region. Other states are combined into groups of between two and eight states to form a region (such as the Northeast region and Midwest region). Our results are qualitatively the same when we do not normalize in this way.



## Notes:

- [1] Experience is defined as 1998 - year became agent + 1.
- [2] Agent classification is as of December 31, 1998.
- [3] Restricted to active, non-JUA employee and exclusive agents who are not located in New Jersey or Canada.
- [4] Predicted values use New York region as baseline.

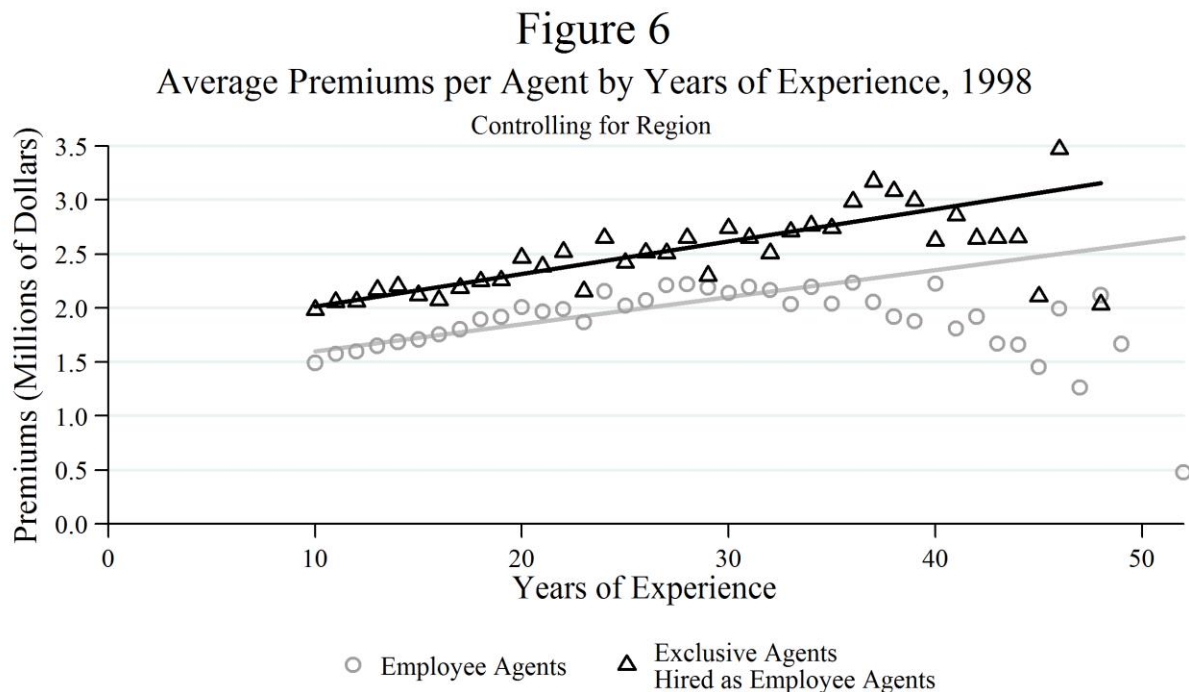
Sources: HRIS, CSRP.

Superimposed on the grey dots in Figure 5 is a line based on a regression that relates agents' premiums to their experience, controlling for the region in which they operate. The regression uses the individual observations on agent performance that are averaged in calculating the circles on the graph – e.g., the left-most circle on the graph is the average premiums for all agents with 10 years of experience, some of whom collected greater premiums and the rest collected smaller premiums than the average, while the regression that relates premiums to years of experience uses each individual agent observation.<sup>73</sup> The line based on this regression slopes upward and thus shows that, averaged over the data as a whole, premiums per agent increase as experience increases. This relationship is statistically significant, which means that it is highly unlikely that there is no relationship between average premiums per agent and years of agent

<sup>73</sup> The multivariate regression analysis is a regression of premiums on the interaction between agent type (exclusive agent hired as an exclusive agent, exclusive agent hired as an employee agent, and employee agent) and years of experience and a fixed effect for each of the seventeen Allstate geographic regions.

experience.<sup>74</sup> Thus, among employee agents who worked for Allstate in 1998, those with more experience generated more premiums on average.<sup>75</sup>

Figure 6 is analogous to Figure 5, but now includes average premiums per agent for exclusive agents who had worked for Allstate for at least ten years, denoted by the black triangles. Again, the lines represent the results of a regression that relates each category of agents' premiums to experience, controlling for the region in which the agent operated.



Notes:

[1] Experience is defined as 1998 - year became agent + 1.

[2] Agent classification is as of December 31, 1998.

[3] Restricted to active, non-JUA employee and exclusive agents who are not located in New Jersey or Canada.

[4] Predicted values use New York region as baseline.

Sources: HRIS, CSRP.

<sup>74</sup> The regression coefficient on the years of experience for employee agents is statistically different from zero using a Wald test of size 0.05. This result means that it is highly unlikely that there is no relationship between average premiums per employee agent and years of agent experience.

<sup>75</sup> The line “fits” the dots shown in the figure best for agents with up to about 35 years of experience, and does not fit it as well for agents with greater experience; this reflects the fact that there are relatively few agents with the higher levels of experience so their data receive relatively little weight in the regression’s calculation of the average relationship between experience and premiums collected. I have also estimated a more complicated regression specification (quadratic) which takes into account the change in the trend for agents with more experience; my conclusions are qualitatively the same based on this additional analysis. (See Appendix C.)

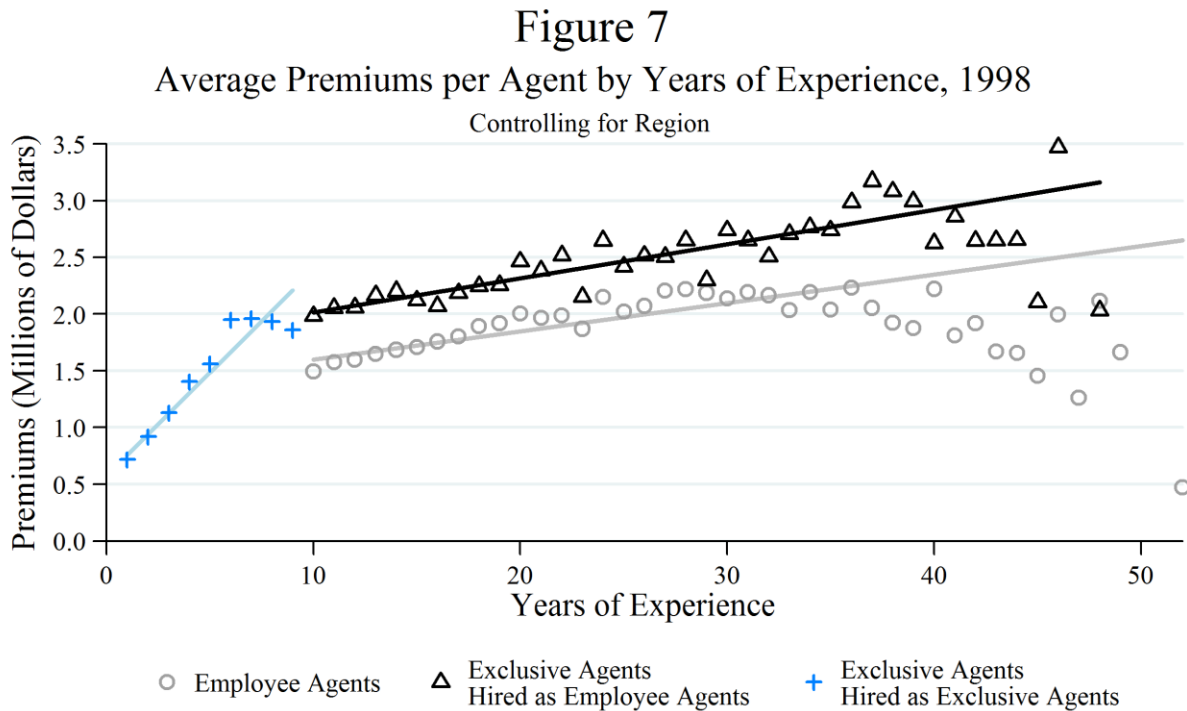
Three features are evident from comparing the exclusive agents to the employee agents that together provide evidence that the premiums generated by Allstate's exclusive agents in 1998 were greater than those generated by their employee agents, holding experience and region constant. First, on average, the exclusive agents that converted to independent contractors earned higher premiums than did those who remained as employees and had the same number of years of experience (i.e., for a given number of years of experience, the black triangles are virtually always higher than the grey circles). Second, the drop off in growth in average premiums as years of experience increases is not as evident for the EAs that were formerly employee agents as for those who remained employees – this is especially evident for agents with 35-45 years of experience (although, as noted above, there are relatively few agents with such long experience). Finally, as shown by the comparison of the dark and light regression lines in the figure, both the amount of premiums earned by the average agent and the growth in premiums as the agent becomes more experienced are higher for agents that became exclusive agents than for those who did not.<sup>76</sup>

In Figure 7, I include a third group of agents in the comparison – agents with less than 10 years of experience. All of these are exclusive agents hired into the EA program.<sup>77</sup> The blue crosses (and corresponding line) show that average premiums per agent grow sharply in the agents' first few years as an Allstate agent, which is not surprising given that new agents that do not purchase a book of business generally start without any substantial customer base. Agents with nine years of experience average more in premiums than employee agents with 10-20 years of experience and about the same as those agents with 10 years of experience who had chosen to convert to EAs in earlier years.

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<sup>76</sup> Using a one-sided Wald test of size 0.05, I find that the black line (the predicted premiums for an exclusive agent hired as an employee agent) exceeds the grey line (the predicted premiums for an employee agent) both for the expected amount of premiums at ten years of experience and the increase in premiums that results from an extra year of experience.

<sup>77</sup> Agents who joined Allstate as EAs beginning in 1990 could start either as trainees who had no book of business or by purchasing a book of business from an existing Allstate EA. The agents who start as trainees generate fewer premiums in the first few years than those who start by purchasing a book, but this difference diminishes rapidly over time; after four years, I find no evidence of differences. Thus, the fact that some agents started out by purchasing a book is unlikely to affect average premiums among agents with 7-9 years' experience, and therefore is unlikely to affect the comparison in Figure 7. In all of my figures, I include trainees as exclusive agents. Since the trainee program lasted 18 months, less than 1 percent of agents with more than 3 years of experience were trainees and removing the trainees does not affect my analysis.



## Notes:

[1] Experience is defined as 1998 - year became agent + 1.

[2] Agent classification is as of December 31, 1998.

[3] Restricted to active, non-JUA employee and exclusive agents who are not located in New Jersey or Canada.

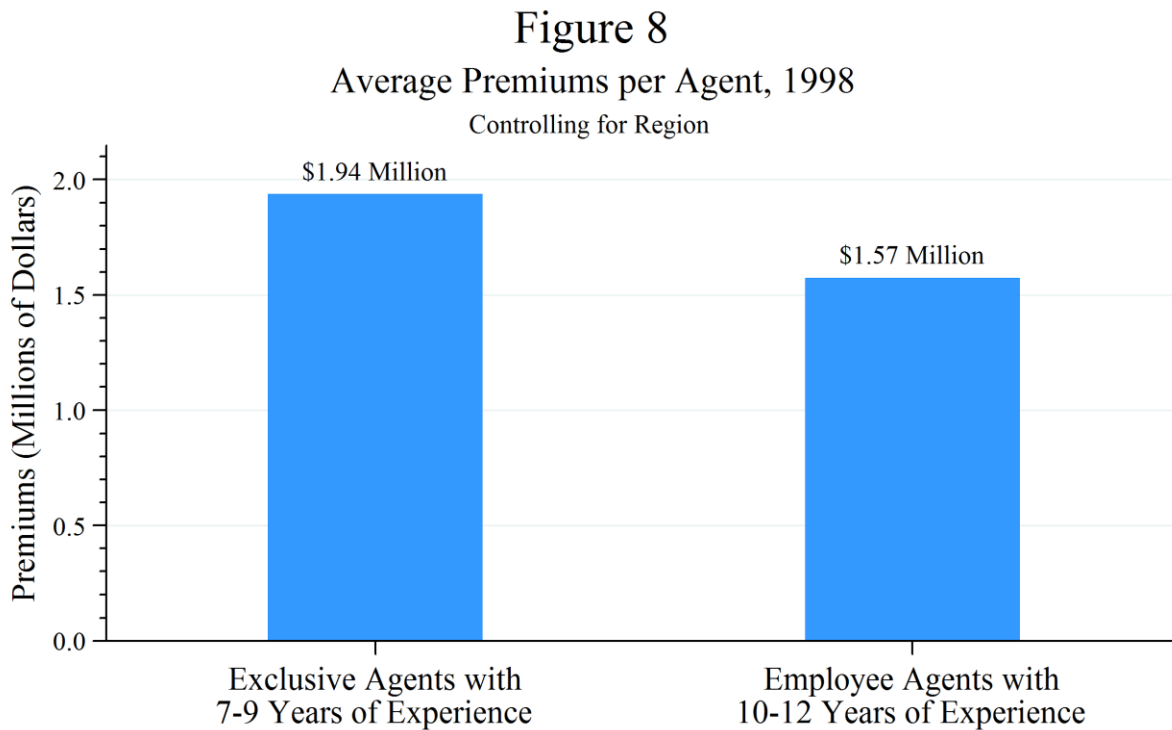
[4] Predicted values use New York region as baseline.

Sources: HRIS, CSRP.

Figure 8 compares the average performance of exclusive agents with 7-9 years of experience (the bar on the left)<sup>78</sup> with the performance of employee agents with 10-12 years of experience (the bar on the right), again accounting for region. It thus compares the most experienced agents who were hired as exclusive agents with the least experienced agents hired as employee agents (who had remained employee agents through 1998). A statistical test confirms that these exclusive agents outperform employee agents with 3-5 years of additional experience.<sup>79</sup>

<sup>78</sup> This is the weighted average of the last three blue crosses shown in Figure 7. Because there are different numbers of agents underlying the calculation for each of the blue crosses, the simple average of the values of those crosses (i.e., the sum of the average premiums for each of the three years divided by three) differs slightly from the value shown in Figure 7. For Figure 8, I averaged the premiums for all the individuals with 7-9 years of experience.

<sup>79</sup> For the statistical analysis, I run a regression of premiums on the type of agent (exclusive agent hired as an exclusive agent, exclusive agent hired as an employee agent, and employee agent) and region fixed effects for



Notes:

[1] Experience is defined as 1998 - year became agent + 1.

[2] Agent classification is as of December 31, 1998.

[3] Restricted to active, non-JUA employee and exclusive agents who are not located in New Jersey or Canada.

[4] Predicted values use New York region as baseline.

Sources: HRIS, CSRP.

Finally, I conduct analyses analogous to those presented above for new and renewal premiums separately. It is in Allstate's interest for its agents to both seek new business and encourage existing customers to renew their policies. I therefore examine whether the evidence is consistent with EAs outperforming employee agents in generating both new and renewal premiums.

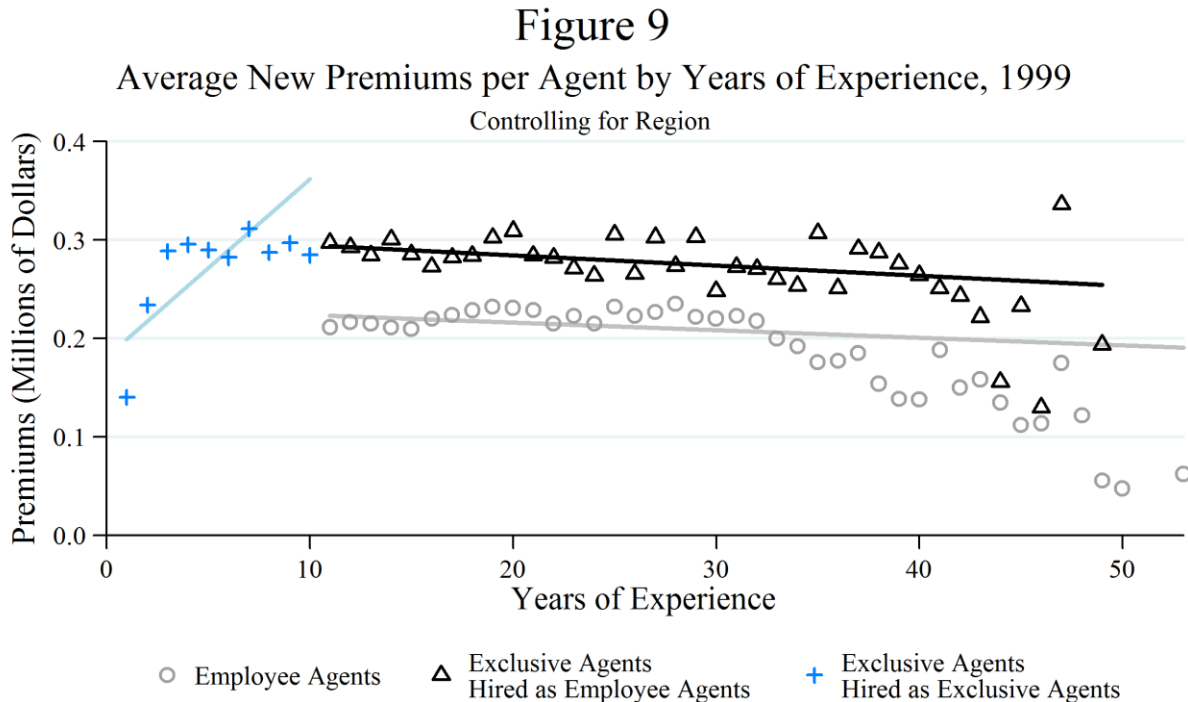
Figure 9 shows average new premiums per agent, by experience level, for my three categories of agents. Average new premiums are higher for exclusive agents than for employee agents, conditional on experience. As with my analysis of total premiums per agent, these differences are statistically significant when comparing exclusive agents and employee agents

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agents with 7 to 12 years of experience. I then run a Wald test to compare the coefficient on having 7-9 years of experience as an exclusive agent hired as an exclusive agent with having 10-12 years of experience as an employee agent.



with at least 10 years of experience, and when comparing exclusive agents with 7-9 years of experience to employee agents with 10-12 years of experience.<sup>80</sup> The figure also shows that new premiums tend to decline after an agent has been working for a few years.



Notes:

- [1] Experience is defined as 1999 - year became agent + 1.
- [2] Agent classification is as of December 31, 1999.
- [3] Restricted to active, non-JUA employee and exclusive agents who are not located in New Jersey or Canada.
- [4] Predicted values use New York region as baseline.

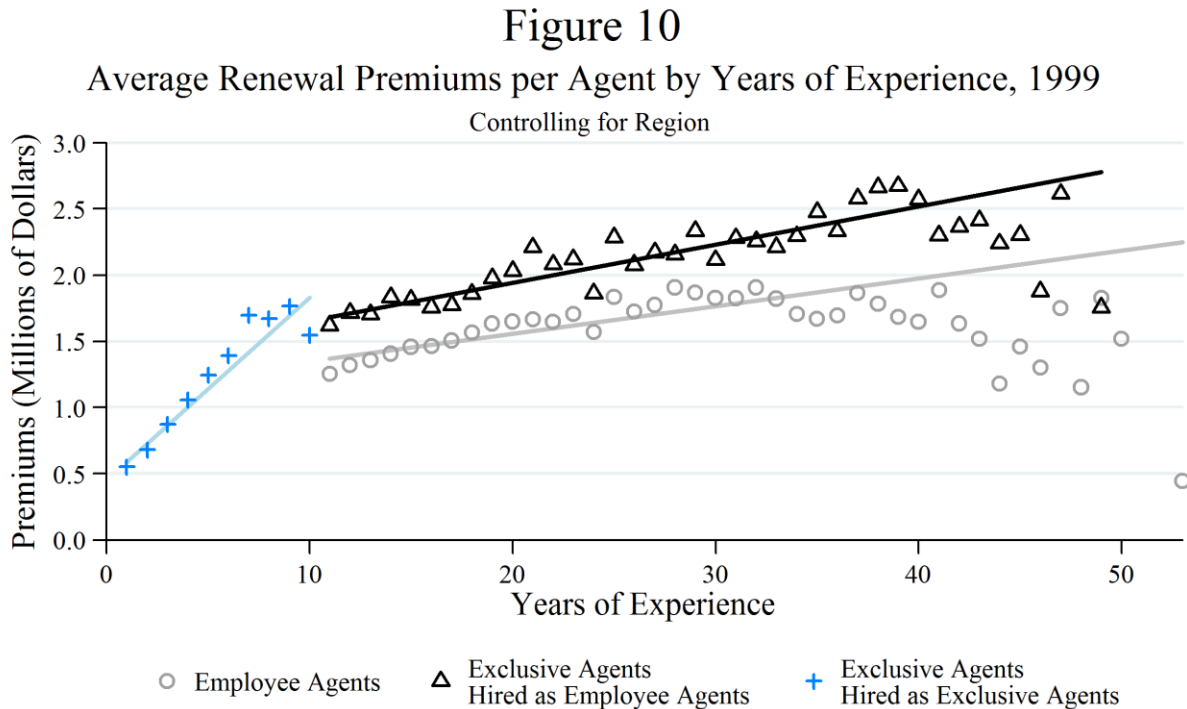
Sources: HRIS, CSRP.

Figure 10 shows average renewal premiums per agent, by experience level, for my three categories of agents. As is the case for new premiums, average renewal premiums are higher for exclusive agents than for employee agents, conditional on experience.<sup>81</sup> Renewal premiums tend

<sup>80</sup> As above, I run a regression that related new premiums to experience, allowing the relationship to differ for each of the three agent classes and including region fixed effects. I test whether the predicted values for exclusive agents with at least ten years' experience were greater than those for employee agents with at least ten years' experience, and whether the predicted values for agents with 7-9 years' experience was greater than those for employee agents with 10-12 years' experience. I find both differences to be statistically significant, using a Wald test of size 0.05.

<sup>81</sup> I performed analogous statistical tests to those I performed for new premiums, and found these differences to be statistically significant.

to grow with years of experience, and thus contribute to a growing fraction of agents' total premiums.



Notes:

[1] Experience is defined as 1999 - year became agent + 1.

[2] Agent classification is as of December 31, 1999.

[3] Restricted to active, non-JUA employee and exclusive agents who are not located in New Jersey or Canada.

[4] Predicted values use New York region as baseline.

Sources: HRIS, CSRP.

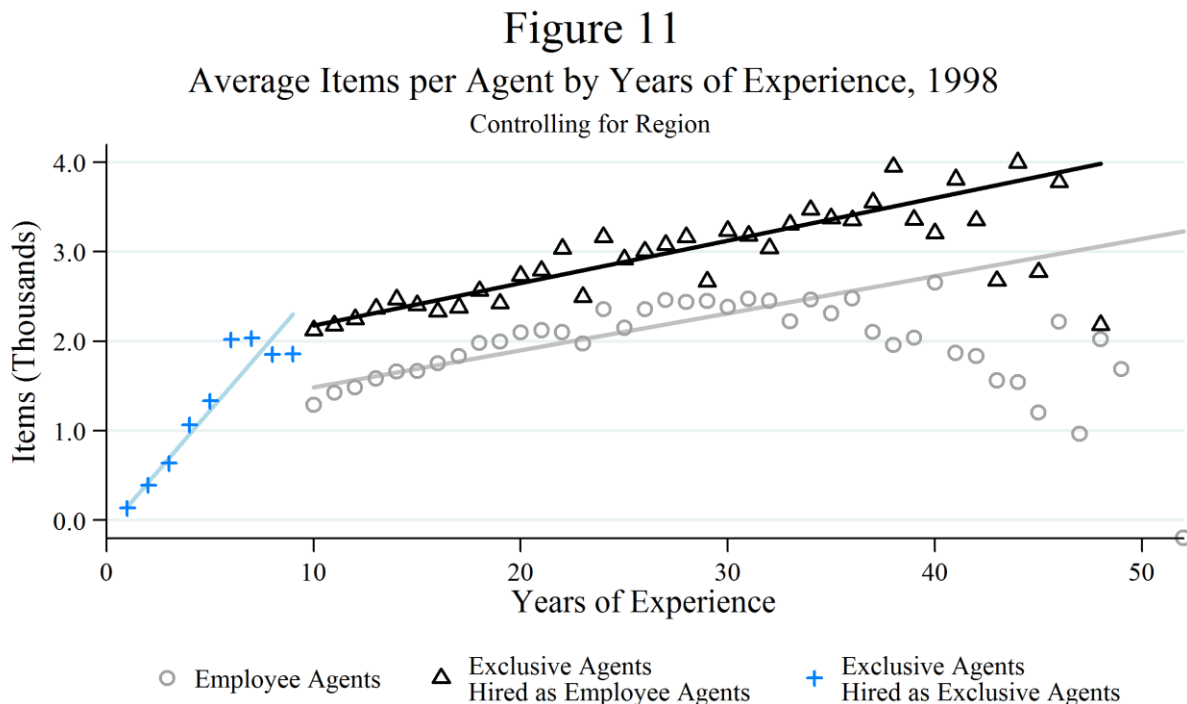
Thus, my previous finding that average premiums per agent are higher for exclusive agents than for employee agents reflects findings that exclusive agents both generated more new business and more renewal business than employee agents with similar experience levels.

#### **4. Independent Contractors with Comparable Experience Insure More Items on Average than Do Employee Agents**

Premiums generated is one measure of agent productivity. A second measure reported in CSRP is the number of items that customers insure through the agent. To the extent that more productive agents will tend to insure more items (e.g., more cars, house and car, etc.), then comparison of the average number of items insured per agent by contract type can provide additional evidence of relative performance of agents with equivalent years of experience. Thus,

I have done analysis similar to what I discuss above but using average number of items insured as the measure of performance rather than average premiums collected.

Figure 11 is comparable to Figure 7, and shows average items insured per agent in 1998 for the three groups of agents. The pattern and conclusions are the same: (1) the most experienced agents who were hired as exclusive agents outperform employee agents with greater experience; and (2) agents who converted from employees to exclusive agents outperform employee agents both in the level of and growth in premiums as they gain experience.<sup>82</sup>



Notes:

[1] Experience is defined as 1998 - year became agent + 1.

[2] Agent classification is as of December 31, 1998.

[3] Restricted to active, non-JUA employee and exclusive agents who are not located in New Jersey or Canada.

[4] Predicted values use New York region as baseline.

Sources: HRIS, CSRP.

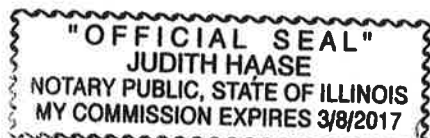
<sup>82</sup> There is little difference between the average premiums per item for employee agents and for EAs for any number of years of experience.

## V. CONCLUSION

Based on the evidence and analysis that I presented above, I have concluded that Allstate had a reasonable economic justification for moving to an exclusively independent contractor agent distribution model in 2000.

I declare under penalty of perjury that the foregoing is true and correct.

Kevin M. Murphy



3/1/17

Judith Haase

## **Appendix A: Curriculum Vitae**

# **Kevin M. Murphy**

March 2017

### *Business Address:*

The University of Chicago  
Booth School of Business  
5807 South Woodlawn Avenue  
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### *Home Address:*

1810 Pennington Court  
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## **Current Positions**

July 2005-Present: George J. Stigler Distinguished Service Professor of Economics,  
Department of Economics and Booth School of Business, The University of Chicago

Faculty Research Associate, National Bureau of Economic Research

Co-Chair Becker Friedman Institute for Research in Economics, The University of  
Chicago

## **Education**

University of California, Los Angeles, A.B., Economics, 1981

The University of Chicago, Ph.D., 1986

Thesis Topic: *Specialization and Human Capital*

## **Previous Research and Academic Positions**

2002-2005: George J. Stigler Professor of Economics, Department of Economics and  
Booth School of Business, The University of Chicago

1993 – 2002: George Pratt Shultz Professor of Business Economics and Industrial  
Relations, The University of Chicago

1989 – 1993: Professor of Business Economics and Industrial Relations, The University  
of Chicago

1988 – 1989: Associate Professor of Business Economics and Industrial Relations, The University of Chicago

1986 – 1988: Assistant Professor of Business Economics and Industrial Relations, The University of Chicago

1983 – 1986: Lecturer, Booth School of Business, The University of Chicago

1982 – 1983: Teaching Associate, Department of Economics, The University of Chicago

1979 – 1981: Research Assistant, Unicon Research Corporation, Santa Monica, California

### **Honors and Awards**

2008: John von Neumann Lecture Award, Rajk College, Corvinus University, Budapest

2007: Kenneth J. Arrow Award (with Robert H. Topel)

October 2005: Garfield Research Prize (with Robert H. Topel)

September 2005: MacArthur Foundation Fellow

1998: Elected to the American Academy of Arts & Sciences

1997: John Bates Clark Medalist

1993: Fellow of The Econometric Society

1989 – 1991: Sloan Foundation Fellowship, The University of Chicago

1983 – 1984: Earhart Foundation Fellowship, The University of Chicago

1981 – 1983: Fellowship, Friedman Fund, The University of Chicago

1980 – 1981: Phi Beta Kappa, University of California, Los Angeles

1980 – 1981: Earhart Foundation Fellowship, University of California, Los Angeles

1979 – 1981: Department Scholar, Department of Economics, University of California, Los Angeles

### **Publications**

#### **Books**

Social Economics: Market Behavior in a Social Environment with Gary S. Becker, Cambridge, MA: Harvard University Press (2000).

Measuring the Gains from Medical Research: An Economic Approach, edited volume with Robert H. Topel, Chicago: The University of Chicago Press (2003).

### Chapters in Books

“Income and Wealth in America,” with Emmanuel Saez, in Inequality and Economic Policy, ed. Tom Church, Christopher Miller, John B. Taylor, Stanford, CA: Hoover Press (2015)

### Articles

“Government Regulation of Cigarette Health Information,” with Benjamin Klein and Lynne Schneider, 24 *Journal of Law and Economics* 575 (1981).

“Estimation and Inference in Two-Step Econometric Models,” with Robert H. Topel, 3 *Journal of Business and Economic Statistics* 370 (1985).

“Unemployment, Risk, and Earnings: Testing for Equalizing Wage Differences in the Labor Market,” with Robert H. Topel, in Unemployment and the Structure of Labor Markets, pp. 103-139, ed. Kevin Lang and Jonathan S. Leonard. London: Basil Blackwell (1987).

“The Evolution of Unemployment in the United States: 1968-1985,” with Robert H. Topel, in NBER Macroeconomics Annual, pp. 11-58, ed. Stanley Fischer. Cambridge, MA: MIT Press (1987).

“Cohort Size and Earnings in the United States,” with Mark Plant and Finis Welch, in Economics of Changing Age Distributions in Developed Countries, pp. 39-58, ed. Ronald D. Lee, W. Brian Arthur, and Gerry Rodgers. Oxford: Clarendon Press (1988).

“The Family and the State,” with Gary S. Becker, 31 *Journal of Law and Economics* 1 (1988).

“A Theory of Rational Addiction,” with Gary S. Becker, 96 *Journal of Political Economy* 675 (1988).

“Vertical Restraints and Contract Enforcement,” with Benjamin Klein, 31 *Journal of Law and Economics* 265 (1988).

“Income Distribution, Market Size, and Industrialization,” with Andrei Shleifer and Robert W. Vishny, 104 *Quarterly Journal of Economics* 537 (1989).

“Wage Premiums for College Graduates: Recent Growth and Possible Explanations,” with Finis Welch, 18 *Educational Researcher* 17 (1989).

“Industrialization and the Big Push,” with Andrei Shleifer and Robert W. Vishny, 97 *Journal of Political Economy* 1003 (1989).

“Building Blocks of Market Clearing Business Cycle Models,” with Andrei Shleifer and Robert W. Vishny, in NBER Macroeconomic Annual, pp. 247-87, ed. Olivier Jean Blanchard and Stanley Fischer. Cambridge, MA: MIT Press (1989).

“Efficiency Wages Reconsidered: Theory and Evidence,” with Robert H. Topel, in Advances in the Theory and Measurement of Unemployment, pp. 204-240. ed. Yoram Weiss and Gideon Fishelson. London: Macmillan (1990).

“Empirical Age-Earnings Profiles,” with Finis Welch, 8 *Journal of Labor Economics* 202 (1990).

“Human Capital, Fertility, and Economic Growth,” with Gary S. Becker and Robert F. Tamura, 98 *Journal of Political Economy*, S12 (1990).

“Accounting for the Slowdown in Black-White Wage Convergence,” with Chinhui Juhn and Brooks Pierce, in Workers and Their Wages: Changing Patterns in the United States, pp. 107-143, ed. Marvin Kosters. Washington, D.C.: American Enterprise Institute (1991).

“The Role of International Trade in Wage Differentials,” with Finis Welch, in Workers and Their Wages: Changing Patterns in the United States, pp. 39- 69, ed. Marvin Kosters. Washington, D.C.: American Enterprise Institute (1991).

“Why Has the Natural Rate of Unemployment Increased over Time?” with Robert H. Topel and Chinhui Juhn, 2 *Brookings Papers on Economic Activity* 75 (1991).

“The Allocation of Talent: Implications for Growth,” with Andrei Shleifer and Robert W. Vishny, 106 *Quarterly Journal of Economics* 503 (1991).

“Rational Addiction and the Effect of Price on Consumption,” with Gary S. Becker and Michael Grossman, 81 *American Economic Review* 237 (1991).

“Wages of College Graduates,” in The Economics of American Higher Education, pp. 121-40, ed. William E. Becker and Darrell R. Lewis. Boston: Kluwer Academic Publishers (1992).

“Changes in Relative Wages, 1963-1987: Supply and Demand Factors,” with Lawrence F. Katz, 107 *Quarterly Journal of Economics* 35 (1992).

“The Structure of Wages,” with Finis Welch, 107 *Quarterly Journal of Economics* 285 (1992).

“The Transition to a Market Economy: Pitfalls of Partial Planning Reform,” with Andrei Shleifer and Robert W. Vishny, 107 *Quarterly Journal of Economics* 889 (1992).

“The Division of Labor, Coordination Costs, and Knowledge,” with Gary S. Becker, 107 *Quarterly Journal of Economics* 1137 (1992).



“Industrial Change and the Rising Importance of Skill” with Finis Welch, in Uneven Tides: Rising Inequality in America, pp. 101-132, ed. Peter Gottschalk and Sheldon Danziger. New York: Russell Sage Foundation Publications (1993).

“Wage Inequality and the Rise in Returns to Skill,” with Chinhui Juhn and Brooks Pierce, 101 *Journal of Political Economy* 410 (1993).

“Occupational Change and the Demand for Skill, 1940-1990,” with Finis Welch, 83 *American Economic Review* 122 (1993).

“Inequality and Relative Wages,” with Finis Welch, 83 *American Economic Review* 104 (1993).

“Why Is Rent-Seeking So Costly to Growth?” with Andrei Shleifer and Robert W. Vishny, 83 *American Economic Review* 409 (1993).

“A Simple Theory of Advertising as a Good or Bad,” with Gary S. Becker, 108 *Quarterly Journal of Economics* 941 (1993).

“Relative Wages and Skill Demand, 1940-1990,” with Chinhui Juhn, in Labor Markets, Employment Policy, and Job Creation, pp. 343-60, ed. Lewis C. Solmon and Alec R. Levenson. The Milken Institute Series in Economics and Education. Boulder, CO: Westview Press (1994).

“Cattle Cycles,” with Sherwin Rosen and Jose A. Scheinkman, 102 *Journal of Political Economy* 468 (1994).

“An Empirical Analysis of Cigarette Addiction,” with Gary S. Becker and Michael Grossman, 84 *American Economic Review* 396 (1994).

“Inequality in Labor Market Outcomes: Contrasting the 1980s and Earlier Decades,” with Chinhui Juhn, 1 *Economic Policy Review* 26 (1995).

“Employment and the 1990-91 Minimum Wage Hike,” with Donald R. Deere and Finis Welch, 85 *American Economic Review* 232 (1995).

“Examining the Evidence on Minimum Wages and Employment,” with Donald R. Deere and Finis Welch, in The Effects of the Minimum Wage on Employment, pp. 26-54, ed. Marvin H. Koster. Washington, D.C.: The AEI Press (1996).

“Social Status, Education, and Growth,” with Chaim Fershtman and Yoram Weiss, 104 *Journal of Political Economy* 108 (1996).

“Wage Inequality and Family Labor Supply,” with Chinhui Juhn, 15 *Journal of Labor Economics* 72 (1997).

“Quality and Trade,” with Andrei Shleifer, 53 *Journal of Development Economics* 1 (1997).

“Vertical Integration as a Self-Enforcing Contractual Arrangement,” with Benjamin Klein, 87 *American Economic Review* 415 (1997).

“Unemployment and Nonemployment,” with Robert H. Topel, 87 *American Economic Review* 295 (1997).

“Wages, Skills, and Technology in the United States and Canada,” with W. Craig Riddell and Paul M. Romen, in General Purpose Technologies and Economic Growth, pp. 283-309, ed. Elhanan Helpman. Cambridge, MA: M.I.T. Press (1998).

“Perspectives on the Social Security Crisis and Proposed Solutions,” with Finis Welch, 88 *American Economic Review* 142 (1998).

“Population and Economic Growth,” with Gary S. Becker and Edward Glaeser, 89 *American Economic Review* 145 (1999).

“A Competitive Perspective on Internet Explorer,” with Steven J. Davis, 90 *American Economic Review* 184 (2000).

“Industrial Change and the Demand for Skill,” with Finis Welch, in The Causes and Consequences of Increasing Inequality, pp. 263-84, ed. Finis Welch. Volume II in the Bush School Series in the Economics of Public Policy. Chicago: The University of Chicago Press (2001).

“Wage Differentials in the 1990s: Is the Glass Half Full or Half Empty?” with Finis Welch, in The Causes and Consequences of Increasing Inequality, pp. 341-64, ed. Finis Welch. Volume II in the Bush School Series in the Economics of Public Policy. Chicago: The University of Chicago Press (2001).

“Economic Perspectives on Software Design: PC Operating Systems and Platforms,” with Steven J. Davis and Jack MacCracken, in Microsoft, Antitrust, and the New Economy: Selected Essays, pp. 361-420, ed. Davis S. Evans. Boston, MA: Kluwer (2001).

“Current Unemployment, Historically Contemplated,” with Robert H. Topel and Chinhui Juhn, 1 *Brookings Papers on Economic Activity* 79 (2002).

“The Economics of Copyright ‘Fair Use’ in A Networked World,” with Andres Lerner and Benjamin Klein, 92 *American Economic Review* 205 (2002).

“The Economic Value of Medical Research,” with Robert H. Topel, in Measuring the Gains from Medical Research: An Economic Approach, pp. 41-73, ed. Robert H. Topel and Kevin M. Murphy. Chicago: The University of Chicago Press (2003).

“School Performance and the Youth Labor Market,” with Sam Peltzman, 22 *Journal of Labor Economics* 299 (2003).

“Entrepreneurial ability and market selection in an infant industry: evidence from the Japanese cotton spinning industry,” with Atsushi Ohyama and Serguey Braguinsky, 7 *Review of Economic Dynamics* 354 (2004).

“Entry, Pricing, and Product Design in an Initially Monopolized Market,” with Steven J. Davis and Robert H. Topel, 112 *Journal of Political Economy* S188 (2004).

“Diminishing Returns: The Costs and Benefits of Increased Longevity,” with Robert H. Topel, 46 *Perspectives in Biology and Medicine* S108 (2004).

“Persuasion in Politics,” with Andrei Shleifer, 94 *American Economic Review* 435 (May 2004).

“Black-White Differences in the Economic Value of Improving Health,” with Robert H. Topel, 48 *Perspectives in Biology and Medicine* S176 (2005).

“The Equilibrium Distribution of Income and the Market for Status,” with Gary S. Becker and Iván Werning, 113 *Journal of Political Economy* 282 (2005).

“The Market for Illegal Goods: The Case of Drugs,” with Gary S. Becker and Michael Grossman, 114 *Journal of Political Economy* 38 (2006).

“Competition in Two-Sided Markets: The Antitrust Economics of Payment Card Interchange Fees,” with Benjamin Klein, Kevin Green, and Lacey Place, 73 *Antitrust Law Journal* 571 (2006).

“The Value of Health and Longevity,” with Robert H. Topel, 114 *Journal of Political Economy* 871 (2006).

“Social Value and the Speed of Innovation,” with Robert H. Topel, 97 *American Economic Review* 433 (2007).

“Education and Consumption: The Effects of Education in the Household Compared to the Marketplace,” with Gary S. Becker, 1 *The Journal of Human Capital* 9 (Winter 2007).

“Why Does Human Capital Need a Journal?” with Isaac Ehrlich, 1 *The Journal of Human Capital* 1 (Winter 2007).

“Critical Loss Analysis in the Whole Foods Case,” with Robert H. Topel, 3 (2) *GCP Magazine* (March 2008).

“Exclusive Dealing Intensifies Competition for Distribution,” with Benjamin Klein, 75 *Antitrust Law Journal* (October 2008).

“Fertility Decline, the Baby Boom and Economic Growth,” with Curtis Simon and Robert Tamura, 2 *The Journal of Human Capital* 3 (Fall 2008).

“The Market for College Graduates and the Worldwide Boom in Higher Education of Women,” with Gary S. Becker and William H. J. Hubbard, 100 *American Economic Review: Papers & Proceedings* 229 (May 2010).

“Explaining the Worldwide Boom in Higher Education of Women,” with Gary S. Becker and William H. J. Hubbard, 4 *Journal of Human Capital* No. 3 (2010).

“How Exclusivity is Used to Intensify Competition for Distribution-Reply to Zenger,” with Benjamin Klein, 77 *Antitrust Law Journal* No. 2 (2011).

“Achieving Maximum Long-Run Growth,” *Federal Reserve Bank of Kansas City Proceedings of the Annual Jackson Hole Conference 2011*.

“On the Economics of Climate Policy,” with Gary S. Becker and Robert H. Topel, 10 *B.E. Journal of Economic Analysis and Policy* No. 2 (2011).

“Measuring Crack Cocaine and its Impact,” with Roland G. Fryer, Jr., Paul S. Heaton, and Steven D. Levitt, 51 *Economic Inquiry* No. 3 (July 2013).

“Some Basic Economics of National Security,” with Robert H. Topel, 103 *American Economic Review* No. 3 (2013).

“Activating *Actavis*: A More Complete Story,” with Barry C. Harris, Robert D. Willig, and Matthew B. Wright, 28 *Antitrust* No. 2 (Spring 2014).

“Competitive Discounts and Antitrust Policy,” with Edward A. Snyder and Robert H. Topel, Chapter 5 of *The Oxford Handbook of International Antitrust Economics*, Volume 2 (2014).

“Gary Becker as Teacher,” 105 *American Economic Review* No. 5 (2015).

“Black and White Fertility, Differential Baby Booms: The Value of Equal Education Opportunity,” with Robert Tamura and Curtis Simon, 82 *Journal of Demographic Economics*, Issue 1 (2016).

“Human Capital Investment, Inequality and Economic Growth,” with Robert H. Topel, 34 *Journal of Labor Economics*, No. S2/Part 2 (2016).

### **Selected Working Papers**

“Gauging the Economic Impact of September 11<sup>th</sup>,” with Gary S. Becker, Unpublished Working Paper (October 2001).

“War In Iraq Versus Containment: Weighing the Costs,” with Steven J. Davis and Robert H. Topel, NBER Working Paper No.12092 (March 2006).

“The Interaction of Growth in Population and Income,” with Gary S. Becker, Unpublished Working Paper (2006).

“Persuasion and Indoctrination,” with Gary Becker (2007).

“The Value of Life Near Its End and Terminal Care,” with Gary S. Becker and Tomas Philipson (2007).

“On the Economics of Climate Policy,” with Gary S. Becker and Robert H. Topel, Working Paper No. 234 (January 2010, Revised September 2010).

“The Manipulation of Children’s Preferences, Old Age Support, and Investment in Children’s Human Capital,” with Gary S. Becker and Jörg L. Spenkuch, Unpublished Working Paper (February 2012).

“The Collective Licensing of Music Performance Rights: Market Power, Competition and Direct Licensing” (March 2013).

“Activating *Actavis* with A More Complete Model,” with Michael G. Baumann, John P. Bigelow, Barry C. Harris, Janusz A. Ordover, Robert D. Willig, and Matthew B. Wright, (January 2014).

“A Theory of Bundling Advertisements in Media Markets,” with Ignacio Palacios-Huerta, NBER Working Paper No. 229994 (December 2016).

### **Selected Comments**

Comment on “Causes of Changing Earnings Equality” by Robert Z. Lawrence. Federal Reserve Bank of Kansas City (1998).

“Comment: Asking the Right Questions in the Medicare Reform Debate,” Medicare Reform: Issues and Answers, pp. 175-81, ed. Andrew J. Rettenmaier and Thomas R. Saving. Chicago: The University of Chicago Press (2000).

Comment on “Social Security and Demographic Uncertainty” by Henning Bohn, in Risk Aspects of Investment-Based Social Security Reform, ed. John Y. Campbell and Martin Feldstein. Chicago: The University of Chicago Press (2001).

Comment on “High Technology Industries and Market Structure” by Hal R. Varian. Federal Reserve Bank of Kansas City (2001).

### **Popular Press Articles**

“The Education Gap Rap,” *The American Enterprise* (March-April 1990), pp. 62.

“Rethinking Antitrust,” with Gary S. Becker, *Wall Street Journal* (February 26, 2001), A22.

“Prosperity Will Rise Out of the Ashes,” with Gary S. Becker, *Wall Street Journal* (October 29, 2001), A22.

“The Economics of NFL Team Ownership,” with Robert H. Topel, report prepared at the request of the National Football League Players’ Association (January 2009).

### Articles About Murphy

“Higher Learning Clearly Means Higher Earning,” by Carol Kleiman. *Chicago Tribune*, March 12, 1989, Jobs Section pp. 1. Long article about “The Structure of Wages” with picture of Murphy.

“Why the Middle Class Is Anxious,” by Louis S. Richman. *Fortune*, May 21, 1990, pp. 106. Extensive reference to Murphy's work on returns to education.

“Unequal Pay Widespread in U.S.,” by Louis Uchitelle, *New York Times*, August 14, 1990, Business Day section pp. 1. Long piece on income inequality.

“One Study’s Rags to Riches Is Another’s Rut of Poverty,” by Sylvia Nasar, *New York Times*, June 17, 1992, Business Section pp. 1. Long piece on the income inequality research.

“Nobels Pile Up for Chicago, but Is the Glory Gone?” by Sylvia Nasar, *New York Times* November 4, 1993, Business Section pp. 1. Long piece on Chicago School of economics. Featured a photo of five of the “brightest stars on the economics faculty” (including Murphy) and a paragraph about Murphy’s research.

“This Sin Tax is Win-Win,” by Christopher Farrell. *Business Week*, April 11, 1994, pp. 30. Commentary section refers to Murphy, Becker, and Grossman’s work on rational addiction.

“Growing inequality and the economics of fragmentation,” by David Warsh, *Boston Sunday Globe*, August 21, 1994, pp. A1. Two-page article with picture and biographical details about Murphy and his research; part of a series about “how the new generation replaced the old in economics.”

“A Pay Raise’s Impact,” by Louis Uchitelle. *New York Times*, January 12, 1995, Business Section pp. 1. Article about consequences of proposed increase in the minimum wage. Articles featuring Murphy's comments on the minimum wage appeared in numerous other publications, including the *Chicago Tribune*; in addition, Murphy was interviewed on CNN (January 26, 1995).

“The Undereducated American,” *Wall Street Journal*, August 19, 1996, A12. Changes in the rate of returns to education.

“In Honor of Kevin M. Murphy: Winner of the John Bates Clark Medal,” by Finis Welch, 14 *Journal of Economic Perspectives* 193 (2000).

**Testimony, Reports, and Depositions (Last 4 Years)**

Deposition of Kevin Murphy, January 16, 2013, in the Matter of Avery Dennison Corporation v. 3M Innovative Properties and 3M Company, The United States District Court for the District of Minnesota.

Amended Expert Report of Kevin M. Murphy, February 8, 2013, in the Matter of New Jersey Dep’t of Env’tl. Prot., et al. v. Atlantic Richfield Co., et al., The United States District Court Southern District of New York.

Expert Report of Professor Kevin M. Murphy, February 8, 2013, in United States of America v. Apple Inc., et al., The United States District Court Southern District of New York.

Declaration of Kevin M. Murphy, February 22, 2013, in the Matter of Willard R. Brown, et al. v. The American Tobacco Co., Inc., et al., Superior Court for the State of California for the County of San Diego.

Rebuttal Expert Report of Kevin M. Murphy, March 1, 2013, in United States of America v. Apple Inc., et al., The United States District Court Southern District of New York.  
Second Supplemental Expert Report of Kevin M. Murphy, March 8, 2013, in the Matter of Retractable Technologies, Inc. and Thomas Shaw v. Becton, Dickinson and Company, The United States District Court for the Eastern District of Texas Marshall Division.

Direct Testimony of Kevin M. Murphy, April 26, 2013, in United States of America v. Apple Inc., et al., The United States District Court Southern District of New York (revised and resubmitted on May 29, 2013).

Declaration of Kevin M. Murphy, May 13, 2013, in the Matter of Brenda Blakeman v. National Milk Producers Federation, et al., The United States District Court for the Southern District of Illinois.

Expert Report of Kevin M. Murphy, May 29, 2013, in the Matter of Microsoft Corporation v. Motorola, Inc., et al., The United States District Court Western District of Washington at Seattle.

Declaration of Kevin M. Murphy, June 6, 2013, in the Matter of WNET, Thirteen, Fox Television Stations, Inc., Twentieth Century Fox Film Corporation, WPIX, Inc., Univision Television Group, Inc., The Univision Network Limited Partnership, and Public Broadcasting Service v. Aereo, Inc. f/k/a Bamboom Labs, Inc., The United States District Court for the Southern District of New York.



Expert Report of Kevin M. Murphy, June 7, 2013, in the Matter of Patrick Brady, et al., v. Airline Pilots Association, International, The United States District Court District of New Jersey.

Rebuttal Expert Report of Kevin M. Murphy, June 10, 2013, in the Matter of Microsoft Corporation v. Motorola, Inc., et al., The United States District Court Western District of Washington at Seattle.

Trial Testimony of Kevin M. Murphy, June 19, 2013, in United States of America v. Apple Inc., et al., The United States District Court Southern District of New York.

Supplemental Expert Report of Kevin M. Murphy, June 21, 2013, in re: High-Tech Employee Antitrust Litigation, The United States District Court Northern District of California San Jose Division.

Trial Testimony of Kevin M. Murphy, July 1, 2013 and July 2, 2013, in re: Tobacco Cases II, Willard R. Brown, et al., v. The American Tobacco Company, et al., The Superior Court of the State of California in and for The County of San Diego Central Division.

Expert Report of Kevin M. Murphy, July 3, 2013, in re: Text Messaging Antitrust Litigation, The United States District Court For the Northern District of Illinois Eastern Division.

Deposition (by videoconference) of Kevin M. Murphy, July 5, 2013, in re: High-Tech Employee Antitrust Litigation, The United States District Court Northern District of California San Jose Division.

Expert Report of Kevin M. Murphy, July 19, 2013, in The Apple iPod iTunes Antitrust Litigation, The United States District Court For the Northern District of California Oakland Division.

Trial Testimony of Kevin M. Murphy, August 29, 2013 and August 30, 2013, in the Matter of Microsoft Corporation v. Motorola, Inc., et al., The United States District Court Western District of Washington at Seattle.

Trial Testimony of Kevin M. Murphy, September 17, 2013, in the Matter of Retractable Technologies, Inc. and Thomas Shaw v. Becton, Dickinson and Company, The United States District Court for the Eastern District of Texas Marshall Division.

Deposition of Kevin M. Murphy, September 26, 2013, in re: Text Messaging Antitrust Litigation, The United States District Court For the Northern District of Illinois Eastern Division

Expert Report of Kevin M. Murphy, September 27, 2013, in re: Petition of Pandora Media, Inc., related to United States of America v. American Society of Composers Authors and Publishers, The United States District Court for the Southern District of New York.



Rebuttal Expert Report of Kevin M. Murphy, October 21, 2013, in re: Petition of Pandora Media, Inc., related to United States of America v. American Society of Composers Authors and Publishers, The United States District Court for the Southern District of New York.

Expert Report of Kevin M. Murphy, October 21, 2013, in the Matter of Mary A. Carroll and Betty C. Lynn, et al., v. Philip Morris USA, Inc., et al., Superior Court for the State of Delaware in and for New Castle County.

Deposition of Kevin M. Murphy, November 2, 2013, in re: Petition of Pandora Media, Inc., related to United States of America v. American Society of Composers Authors and Publishers, The United States District Court for the Southern District of New York.

Rebuttal Expert Report of Kevin M. Murphy, November 8, 2013, in the Matter of US Airways, Inc. v. Sabre Holdings Corp., Sabre, Inc., and Sabre Travel International Ltd., The United States District Court for the Southern District of New York. Case No. 1:11-cv-02725-MGC.

Deposition of Kevin M. Murphy, November 12, 2013, in The Apple iPod iTunes Antitrust Litigation, The United States District Court for the Northern District of California Oakland Division.

Expert Report of Kevin M. Murphy, November 18, 2013, in the Matter of WNET, Thirteen, Fox Television Stations, Inc., Twentieth Century Fox Film Corporation, WPIX, Inc., Univision Television Group, Inc., The Univision Network Limited Partnership, and Public Broadcasting Service v. Aereo, Inc. f/k/a Bamboom Labs, Inc., The United States District Court for the Southern District of New York.

Direct Testimony of Kevin M. Murphy, November 18, 2013, in re: Petition of Pandora Media, Inc., related to United States of America v. American Society of Composers Authors and Publishers, The United States District Court for the Southern District of New York.

Expert Report of Kevin M. Murphy, November 25, 2013, in the Matter of Re High-Tech Employee Antitrust Litigation, The United States District Court for the Northern District of California San Jose Division.

Deposition of Kevin M. Murphy, December 7, 2013, in the Matter of Re High-Tech Employee Antitrust Litigation, The United States District Court for the Northern District of California San Jose Division.

Supplemental Expert Report of Kevin M. Murphy and Robert H. Topel, December 20, 2013, in The Apple iPod iTunes Antitrust Litigation, The United States District Court for the Northern District of California Oakland Division.

Deposition of Kevin M. Murphy, January 8, 2014, in The Apple iPod iTunes Antitrust Litigation, The United States District Court for the Northern District of California Oakland Division.

Expert Report of Kevin M. Murphy, January 22, 2014, in the Matter of Janet Skold and David Dos Santos, et al. v. Intel Corporation, et al., Superior Court of the State of California for the County of Santa Clara.

Trial Testimony of Kevin M. Murphy, January 27, 2014 and January 28, 2014, in re: Petition of Pandora Media, Inc., related to United States of America v. American Society of Composers Authors and Publishers, in The United States District Court for the Southern District of New York.

Deposition of Kevin M. Murphy, March 19, 2014, in the Matter of Janet Skold and David Dos Santos, et al. v. Intel Corporation, et al., Superior Court of the State of California for the County of Santa Clara.

Expert Report of Kevin M. Murphy, May 12, 2014, in the Matter of Sharon Cobb, et al. v. BSH Home Appliances Corporation, The United States District Court for the Central District of California Southern Division.

Deposition of Kevin M. Murphy, July 8, 2014, in the Matter of Sharon Cobb, et al. v. BSH Home Appliances Corporation, The United States District Court for the Central District of California Southern Division.

Expert Report of Kevin M. Murphy, July 25, 2014, in the Matter of City of Detroit, Michigan, The United States Bankruptcy Court for the Eastern District of Michigan.

Expert Report of Kevin M. Murphy, July 31, 2014, in the Matter of Dayna Craft (Withdrawn), Deborah Larsen, individually and on behalf of all others similarly situated v. Philip Morris USA Inc., a corporation, Missouri Circuit Court for the Twenty-Second Judicial District (City of St. Louis). Case No. 002-00406-02.

Deposition of Kevin M. Murphy, August 19, 2014, in the Matter of Dayna Craft (Withdrawn), Deborah Larsen, individually and on behalf of all others similarly situated v. Philip Morris USA Inc., a corporation, Missouri Circuit Court for the Twenty-Second Judicial District (City of St. Louis). Case No. 002-00406-02.

Declaration of Kevin M. Murphy, August 27, 2014, in the Matter of Sharon Cobb, et al. v. BSH Home Appliances Corporation, The United States District Court for the Central District of California Southern Division.

Declaration of Kevin M. Murphy, Ph.D., August 29, 2014, In Support of Defendant Keurig Green Mountain's Opposition To JBR's Motion For A Preliminary Injunction, In Re: Keurig Green Mountain Single Serve Coffee Antitrust Litigation, The United States District Court for the Southern District of New York.

Verified Statement of Kevin M. Murphy, September 5, 2014, in re: STB Docket No. EP 722, Railroad Revenue Adequacy.

Declaration of Kevin M. Murphy, September 19, 2014, in the Matter of County of San Mateo v. CSL Limited; CSL Behring LLC; CSL Plasma; Baxter International Inc.; and Plasma Protein Therapeutics Association, The United States District Court for the Northern District of California San Francisco Division.

Supplemental Expert Report of Kevin M. Murphy, October 17, 2014, in the Matter of Nukote of Illinois, Inc. v. Clover Holdings, Inc., and Clover Technologies Group, LLC, The United States District Court for the Northern District of Texas (Dallas). Case No. 3:10-cv-00580-P.

Expert Report of Kevin M. Murphy, October 30, 2014, in the Matter of Processed Egg Products Antitrust Litigation, Indirect Purchaser Action, The United States District Court for the Eastern District of Pennsylvania. Case No. 08-MD-02002.

Verified Statement of Kevin M. Murphy, November 4, 2014, in re: STB Docket No. EP 722, Railroad Revenue Adequacy.

Deposition (by videoconference) of Kevin M. Murphy, November 17, 2014, in the Matter of County of San Mateo v. CSL Limited; CSL Behring LLC; CSL Plasma; Baxter International Inc.; and Plasma Protein Therapeutics Association, The United States District Court for the Northern District of California San Francisco Division.

Deposition of Kevin M. Murphy, December 1, 2014, in the Matter of Processed Egg Products Antitrust Litigation, Indirect Purchaser Action, The United States District Court for the Eastern District of Pennsylvania. Case No. 08-MD-02002.

Testimony of Kevin M. Murphy, December 10, 2014 and December 11, 2014, in The Apple iPod iTunes Antitrust Litigation, The United States District Court for the Northern District of California Oakland Division.

Deposition of Kevin M. Murphy, December 15, 2014, in the Matter of Nukote of Illinois, Inc. v. Clover Holdings, Inc., and Clover Technologies Group, LLC, The United States District Court for the Northern District of Texas (Dallas), Case No. 3:10-cv-00580-P.

Declaration of Kevin M. Murphy, December 15, 2014, in the Matter of Robert Kotsur, et al. v. Goodman Global, Inc., Goodman Manufacturing Company, L.P., and Goodman Company, L.P., The United States District Court for the Eastern District of Pennsylvania. Case No. 2:14-cv-01147-NS.

Expert Report of Kevin M. Murphy, January 9, 2015, in the Matter of Lori Aspinall and Thomas Geanocopoulos, on behalf of themselves and all others similarly situated, v. Philip Morris, USA, Inc., Superior Court for the Commonwealth of Massachusetts. Case No. 98-6002-BLSI.

Deposition of Kevin M. Murphy, January 12, 2015, in the Matter of Robert Kotsur, et al. v. Goodman Global, Inc., Goodman Manufacturing Company, L.P., and Goodman Company, L.P., The United States District Court for the Eastern District of Pennsylvania. Case No. 2:14-cv-01147-NS.

Second Supplemental Expert Report of Kevin M. Murphy, January 27, 2015, in the Matter of Nukote of Illinois, Inc. v. Clover Holdings, Inc., and Clover Technologies Group, LLC, The United States District Court for the Northern District of Texas (Dallas). Case No. 3:10-cv-00580-P.

Deposition of Kevin M. Murphy, February 9, 2015, in the Matter of Lori Aspinall and Thomas Geanocopoulos, on behalf of themselves and all others similarly situated, v. Philip Morris, USA, Inc., Superior Court for the Commonwealth of Massachusetts. Case No. 98-6002-BLSI.

Expert Report of Kevin M. Murphy, March 13, 2015, in the Matter of Processed Egg Products Antitrust Litigation, Indirect Purchaser Action, The United States District Court for the Eastern District of Pennsylvania. Case No. 08-MD-02002.

Expert Report of Kevin M. Murphy, March 13, 2015, in the Matter of The Dial Corporation, Henkel Consumer Goods, Inc., H.J. Heinz Company, H.J. Heinz Company, L.P., Foster Poultry Farms, Smithfield Foods, Inc., HP Hood LLC, BEF Foods, Inc. and Spectrum Brands, Inc. v. News Corporation, News America Inc., News America Marketing FSI L.L.C., News America Marketing In-Store Services L.L.C., The United States District Court for the Southern District of New York. Case No. 13-cv-06802 (WHP).

Expert Report of Kevin M. Murphy, March 16, 2015, in the Matter of Matthew Edwards, et al. v. National Milk Producers Federation, et al., The United States District Court for the Northern District of California Oakland Division. Case No. 3:11-cv-04766 JSW.

Brief of Professor Kevin M. Murphy, April 9, 2015, in the Matter of The Dow Chemical Company v. Industrial Polymers, Inc., Quabaug Corporation, and Seegott Holdings, Inc., et al., On Petition for Writ of Certiorari to the United States Court of Appeals for the Tenth Circuit, The Supreme Court of the United States. No. 14-1091.

Testimony of Kevin M. Murphy, April 21, 2015, in the Matter of Processed Egg Products Antitrust Litigation, Indirect Purchaser Action, The United States District Court for the Eastern District of Pennsylvania. Case No. 08-MD-02002.

Declaration of Kevin M. Murphy, April 29, 2015, in the Matter of Teladoc, Inc., Teladoc Physicians, P.A., Kyon Hood, and Emmette A. Clark v. Texas Medical Board, Michael Arambula, Julie K. Attebury, Manual G. Guajardo, John R. Guerra, J. Scott Holliday, Margaret C. McNeese, Allan N. Shulkin, Robert B. Simonson, Wynne M. Snoots,

Paulette B. Southard, Karl W. Swann, Surenda K. Varma, Stanley S. Wang, and George Willeford III, et al., The United States District Court for the Western District of Texas Austin Division.

Declaration of Kevin M. Murphy, April 29, 2015, in the Matter of Anne McVicar, et al. v. Goodman Global, Inc., et al., The United States District Court for the Central District of California. Case No. 8:13-cv-01223-DOC-RNB.

Declaration of Kevin M. Murphy, April 30, 2015, in the Matter of PB Property Management, Inc., Janet Helm, Jimmy Jewell, Deborah L. Wagner and Stanley H. Wagner, et al. v. Goodman Manufacturing Company, L.P., and Goodman Global, Inc., The United States District Court for the Middle District of Florida Jacksonville Division. Case No. 3:12-cv-1366-HES-JBT.

Deposition of Kevin M. Murphy, May 1, 2015, in the Matter of The Dial Corporation, Henkel Consumer Goods, Inc., H.J. Heinz Company, H.J. Heinz Company, L.P., Foster Poultry Farms, Smithfield Foods, Inc., HP Hood LLC, BEF Foods, Inc. and Spectrum Brands, Inc. v. News Corporation, News America Inc., News America Marketing FSI L.L.C., News America Marketing In-Store Services L.L.C., The United States District Court for the Southern District of New York. Case No. 13-cv-06802 (WHP).

Deposition of Kevin M. Murphy, May 13, 2015, in the Matter of Processed Egg Products Antitrust Litigation, Indirect Purchaser Action, The United States District Court for the Eastern District of Pennsylvania. Case No. 08-MD-02002.

Deposition of Kevin M. Murphy, May 19, 2015, in the Matter of Hoskin Hogan et al. v. BP West Coast Products LLC et al., The United States Superior Court for the State of California, City of Los Angeles. Case No. BC460880.

Rebuttal Expert Report of Kevin M. Murphy, May 29, 2015, in the Matter of ContentGuard Holdings, Inc. v. Amazon.com, Inc. et al., The United States District Court for the Eastern District of Texas Marshall Division. Case No. 2:13-cv-01112 (JRG).

Expert Report of Kevin M. Murphy, June 8, 2015, in the Matter of Kleen Products LLC, et al. v. International Paper, et al., The United States District Court for the Northern District of Illinois Eastern Division. Case No. 1:10-cv-05711.

Confidential Submission to the U.S. Department of Justice in Connection with Modification of the ASCAP Consent Decree, June 23, 2015.

Testimony of Kevin M. Murphy, July 23, 2015, in re: STB Docket No. EP 722, Railroad Revenue Adequacy.

Expert Report of Kevin M. Murphy, July 27, 2015, in the Matter of Go Computer, Inc., and S. Jerrold Kaplan v. Microsoft Corporation, The United States Superior Court of the State of California for the City and County of San Francisco. Case No. CGC-05-442684.

Supplemental Verified Statement of Kevin M. Murphy, August, 6, 2015, in re: STB Docket No. EP 722, Railroad Revenue Adequacy.

Testimony of Kevin M. Murphy, August 6, 2015 and August 7, 2015, in the Matter of Hoskin Hogan et al. v. BP West Coast Products LLC et al., The United States Superior Court for the State of California, City of Los Angeles. Case No. BC460880.

Rebuttal Disclosure of Kevin. M. Murphy, August 17, 2015, in the Matter of Go Computer, Inc., and S. Jerrold Kaplan v. Microsoft Corporation, The United States Superior Court of the State of California for the City and County of San Francisco. Case No. CGC-05-442684.

Direct Testimony of Kevin M. Murphy, August 18, 2015, in the Matter of US Airways, Inc. v. Sabre Holdings Corp., Sabre, Inc., and Sabre Travel International Ltd., The United States District Court for the Southern District of New York. Case No. 1:11-cv-02725-MGC.

Expert Report of Kevin M. Murphy, August 24, 2015, in the Matter of Fernanda Garber, Mark Lerner, Derek Rasmussen, Robert Silver, Garrett Traub, and Vincent Birbiglia et al. v. Office of the Commissioner of Baseball, et al., The United States District Court for the Southern District of New York. Case No. 12-cv-3704 (SAS).

Deposition of Kevin. M. Murphy, August 28, 2015, in the Matter of Go Computer, Inc., and S. Jerrold Kaplan v. Microsoft Corporation, The United States Superior Court of the State of California for the City and County of San Francisco. Case No. CGC-05-442684.

Expert Report of Kevin M. Murphy, September 8, 2015, in the Matter of Parallel Networks Licensing, LLC v. Microsoft Corporation, The United States District Court for the District of Delaware. Case No. 13-2073-SLR.

Deposition of Kevin M. Murphy, September 16, 2015, in the Matter of Kleen Products LLC, et al. v. International Paper, et al., The United States District Court for the Northern District of Illinois Eastern Division. Case No. 1:10-cv-05711.

Deposition of Kevin M. Murphy, September 28, 2015, in the Matter of Parallel Networks Licensing, LLC v. Microsoft Corporation, The United States District Court for the District of Delaware. Case No. 13-2073-SLR.

Expert Report of Kevin M. Murphy, October 27, 2015, in the Matter of ABS Global, Inc. v. Inguran, LLC d/b/a Sexing Technologies and XY, LLC v Genus PLC, The United States District Court for the Western District of Wisconsin. Case No. 14-cv-503.

Trial Testimony of Kevin M. Murphy, November 13, 2015 and November 17, 2015, in the Matter of Lori Aspinall and Thomas Geanocopoulos, on behalf of themselves and all others similarly situated, v. Philip Morris, USA, Inc., Superior Court for the Commonwealth of Massachusetts. Case No. 98-6002-BLSI.



Deposition of Kevin M. Murphy, January 5, 2016, in the Matter of ABS Global, Inc. v. Inguran, LLC d/b/a Sexing Technologies and XY, LLC v Genus PLC, The United States District Court for the Western District of Wisconsin. Case No. 14-cv-503.

Supplemental Expert Report of Kevin M. Murphy, January 13, 2016, in the Matter of The Dial Corporation, Henkel Consumer Goods, Inc., H.J. Heinz Company, H.J. Heinz Company, L.P., Foster Poultry Farms, Smithfield Foods, Inc., HP Hood LLC, BEF Foods, Inc. and Spectrum Brands, Inc. v. News Corporation, News America Inc., News America Marketing FSI L.L.C., News America Marketing In-Store Services L.L.C., The United States District Court for the Southern District of New York. Case No. 13-cv-06802 (WHP).

Declaration of Kevin M. Murphy, January 26, 2016, in the Matter of ABS Global, Inc. v. Inguran, LLC d/b/a Sexing Technologies and XY, LLC v Genus PLC, The United States District Court for the Western District of Wisconsin. Case No. 14-cv-503.

Expert Report of Kevin M. Murphy, February 5, 2016, in the Matter of Moldex Metric, Inc. v. 3M Company and 3M Innovative Properties Company, The United States District Court for the District of Minnesota. Case No. 2014-cv-01821 (JNE/FLN).

Confidential Submission on Fractional Licensing to the U.S. Department of Justice in Connection with Modification of the ASCAP Consent Decree, February 12, 2016.

Deposition of Kevin M. Murphy, February 16, 2016, in the Matter of Moldex Metric, Inc. v. 3M Company and 3M Innovative Properties Company, The United States District Court for the District of Minnesota. Case No. 2014-cv-01821 (JNE/FLN).

Verified Statement of Kevin M. Murphy, March 7, 2016, Exhibit II-B-2 to CSXT Reply Evidence, in re: STB Docket No. NOR 42142.

Expert Report of Kevin M. Murphy, March 8, 2016, in the Matter of ABS Global, Inc. v. Inguran, LLC d/b/a Sexing Technologies and XY, LLC v Genus PLC, The United States District Court for the Western District of Wisconsin. Case No. 14-cv-503.

Expert Report of Kevin M. Murphy, March 9, 2016, in the Matter of Lisa Watson, Wayne Miner, and James Easley, Individually and on Behalf of All Others Similarly Situated v. Philip Morris Companies, Inc. a corporation, and Philip Morris Incorporated, a corporation, in the Circuit Court of Pulaski County, Arkansas. Case No. CV03-4661.

Trial Testimony of Kevin M. Murphy, April 4, 2016, in the Matter of Dayna Craft (Withdrawn), Deborah Larsen, individually and on behalf of all others similarly situated v. Philip Morris USA Inc., a corporation, Missouri Circuit Court for the Twenty-Second Judicial District (City of St. Louis). Case No. 002-00406-02.

Reply Expert Report of Kevin M. Murphy, April 11, 2016, in the Matter of Kleen Products LLC, et al. v. International Paper, et al., The United States District Court for the Northern District of Illinois Eastern Division. Case No. 1:10-cv-05711.

Responsive Damages Report of Kevin M. Murphy, April 12, 2016, in the Matter of ABS Global, Inc. v. Inguran, LLC d/b/a Sexing Technologies and XY, LLC v. Genus PLC, The United States District Court for the Western District of Wisconsin. Case No. 14-cv-503.

Deposition of Kevin M. Murphy, May 2, 2016, in the Matter of ABS Global, Inc. v. Inguran, LLC d/b/a Sexing Technologies and XY, LLC v. Genus PLC, The United States District Court for the Western District of Wisconsin. Case No. 14-cv-503.  
Verified Statement of Kevin M. Murphy, July 26, 2016, in re: STB Docket No. 704 (Sub-No. 1), Review of Commodity, Boxcar, and TOFC/COFC Exemptions.

Expert Report of Kevin M. Murphy, July 29, 2016, In Re Biogen '755 Patent Litigation, The United States District Court for the District of New Jersey. Civil Action No. 10-2734 (CCC/JAD).

Trial Testimony of Kevin M. Murphy, August 3, 2016 and August 12, 2016, in the Matter of ABS Global, Inc. v. Inguran, LLC d/b/a Sexing Technologies and XY, LLC v. Genus PLC, The United States District Court for the Western District of Wisconsin. Case No. 14-cv-503.

Expert Report of Kevin M. Murphy, September 23, 2016, in the Matter of First Impressions Salon, Inc., Roy Mattson, Belle Foods Trust, Bankruptcy Estate of Yarnell's Ice Cream Company, Inc., Piggly Wiggly Midwest LLC and KPH Healthcare Services, Inc., aka Kinney Drugs, Inc. et.al. v. National Milk Producers Federation, Cooperatives Working Together, Dairy Farmers of America, Inc., Land O'Lakes, Inc., Dairy Lea Cooperative Inc., Agri-Mark, Inc. d/b/a Cabot Creamery Cooperative, Inc., The United States District Court for the Southern District of Illinois. Case No. 3:13-cv-00454-NJR-SCW.

Verified Statement of Kevin M. Murphy, October 26, 2016, in re: STB Docket EP 711 (Sub-No. 1), Reciprocal Switching.

Expert Report of Kevin M. Murphy, November 21, 2016, in the Matter of Valassis Communications, Inc. v. News America Inc., a/k/a News America Marketing Group, News America Marketing FSI, Inc., a/k/a News America Marketing FSI LLC, and News America Marketing In-Store Services, Inc. a/k/a News America Marketing In-Store Services, LLC, The United States District Court for the Eastern District of Michigan, Southern Division. Case No. 2-06-cv-10240-AJT-MJH.

Deposition of Kevin M. Murphy, December 2, 2016 and December 3, 2016, In Re Biogen '755 Patent Litigation, The United States District Court for the District of New Jersey. Civil Action No. 10-2734 (CCC/JAD).



Trial Testimony of Kevin M. Murphy, December 7, 2016 and December 8, 2016, in the Matter of US Airways, Inc. v. Sabre Holdings Corp., Sabre, Inc., and Sabre Travel International Ltd., The United States District Court for the Southern District of New York. Case No. 1:11-cv-02725-MGC.

Expert Report of Kevin M. Murphy, February 23, 2017, in the Matter of 1-800 Contacts, Inc., Before the Federal Trade Commission, Office of Administrative Law Judges, United States of America. Docket No. 9372.

**Appendix B: Materials Relied Upon**

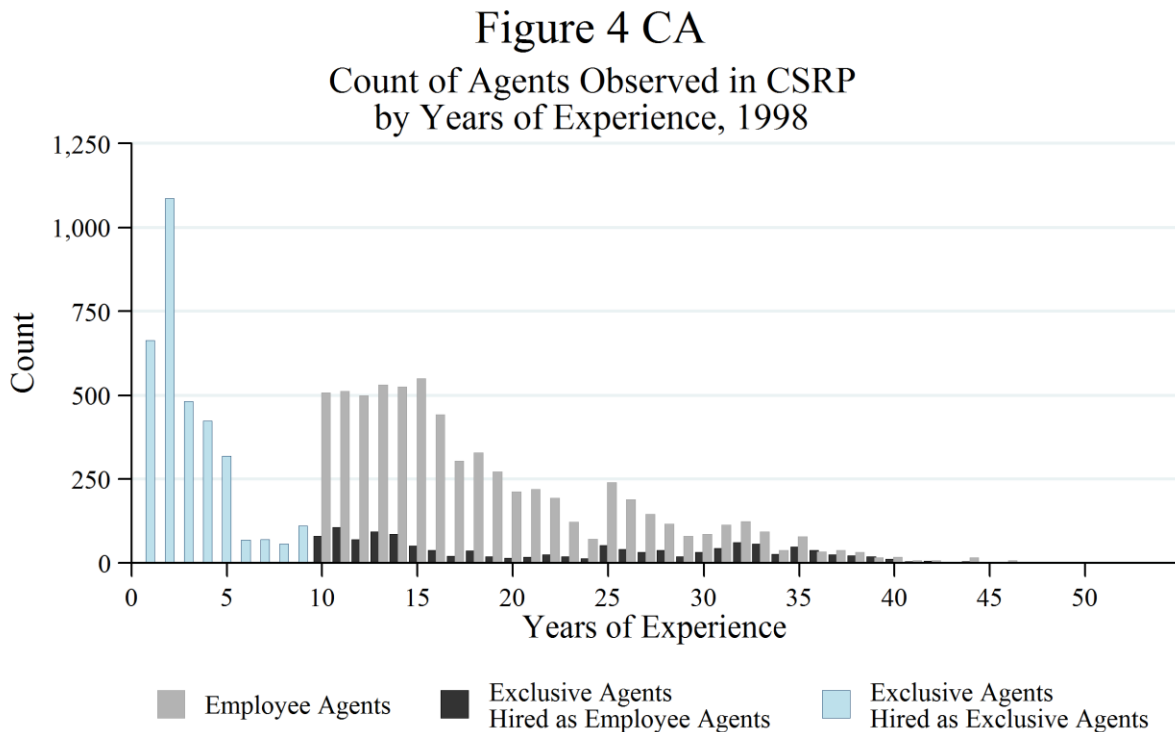
<b>Court Documents</b>
Gene R. Romero, et al. v. Allstate Insurance Company, et al. Class Action - Consolidated Amended Complaint, Jury Trial Demanded 5/20/2016 [Dkt #864]
Gene R. Romero, et al. v. Allstate Insurance Company, et al. Defendants' Motion for Summary Judgment, 12/7/2005, 2:01-cv-3894-PB [Dkt #148]
Gene R. Romero, et al. v. Allstate Insurance Company, et al. Memorandum in Support of Defendants' Motion for Summary Judgement 12/7/2005, 2:01-cv-3894-PB [Dkt #148-1]
Gene R. Romero, et al, v. Allstate Insurance Company, et al. Allstate's Statement of Undisputed Facts in Support of its Motion for Summary Judgment on the Validity and Enforceability of the Release and its Motion for Summary Judgment on the EEOC's Complaint, 4/8/2013, 01-cv-3894 [Dkt #374]
Gene R. Romero, et al, v. Allstate Insurance Company, et al. Allstate's Response to Plaintiff's Second Ammended Statement of Undisputed Facts in Support of their Motion for Summary Judgement on the Release, 6/11/2013, 01-cv-3894 [Dkt #402]
Court's Established Facts (as provided to counsel by Judge Buckwalter on 6/2/2015)
<b>Depositions and Exhibits</b>
Deposition of Barry Hutton on 1/20/2003, Vol. 1
Deposition of Barry Hutton on 1/21/2003, Vol. 2
Deposition of Barry Hutton on 1/22/2003, Vol. 3
Deposition of Barry Hutton on 7/17/2012, Vol. 1
Deposition of Barry Hutton on 7/18/2012, Vol. 2
Trial Proceedings of Edward Liddy on 6/15/2015 in 01-cv-3894
Exhibit 3 to Deposition of Barry Hutton, 1/20/03: Affidavit of Barry L. Hutton Dated 6/9/00, 3:98-cv-00675 (CFD)
Exhibit 4 to Deposition of Barry Hutton, 1/20/03 [ARI 020338-ARI 020349]
Exhibit 18 to Deposition of Barry Hutton, 1/20/03 [ARI 000189-ARI 000202]
Exhibit 19 to Deposition of Barry Hutton, 1/20/03 [ARI 006487-ARI 006514]
Exhibit 25 to Deposition of Barry Hutton, 1/21/03 [ARI 000621-ARI 000656]
Exhibit 26 to Deposition of Barry Hutton, 1/21/03 [ARI 003308-ARI 003326]
Exhibit 28 to Deposition of Barry Hutton, 1/21/03 [ARI 000109-ARI 000125]
Exhibit 29 to Deposition of Barry Hutton, 1/21/03 [ARI 001069-ARI 001089]
Exhibit 30 to Deposition of Barry Hutton, 1/21/03 [ARI 017661-ARI 017661]
Exhibit 31 to Deposition of Barry Hutton, 1/21/03 [ARI 018488-ARI 018501]
Exhibit 35 to Deposition of Barry Hutton, 1/21/03 [ARI 000795-ARI 000860]
Exhibit 37 to Deposition of Barry Hutton, 1/21/03 [ARI 000319-ARI 000349]
Exhibit 47 to Deposition of Barry Hutton, 1/22/03 [TK00506-TK00539]
Exhibit 50 to Deposition of Barry Hutton, 1/22/03 [ARI 004503-ARI 004515]
Exhibit 52 to Deposition of Barry Hutton, 1/22/03 [ARI 004474-ARI 004488]

Exhibit 58 to Deposition of Barry Hutton, 1/22/03: Devaney, D. Letter to Dixon, G. re Romero v. Allstate Insurance Company Dated 5/15/00
Exhibit 61 to Deposition of Barry Hutton, 7/17/12 [ARI 109406-ARI 109437]
Exhibit 64 to Deposition of Barry Hutton, 7/17/12 [ARI 180095-ARI 180113]
Exhibit 65 to Deposition of Barry Hutton, 7/17/12 [AF 053572-AF 053619]
Exhibit 73 to Deposition of Barry Hutton, 7/18/12 [ARI 008200-ARI 008277]
Exhibit 80 to Deposition of Barry Hutton, 7/18/12 [ARI 000040-ARI 000066]
Plaintiff's Exhibit P-376 in 01-cv-3894
Plaintiff's Exhibit P-409 in 01-cv-3894
<b>Data Sources</b>
HRIS files
Customer Satisfaction/ Retention/ Profitability (CSRP) Report [ARI 475059]
<b>Academic Sources</b>
Hubbard, Thomas N., 2004, "Affiliation, Information and Organization: Ownership Incentives and Industry Structure," <i>Journal of Industrial Economics</i> , Vol LII, pp. 201-227
Alonso, R., Wouter Dessein, and Niko Matouschek, 2008, "When Does Coordination Require Centralization," <i>American Economic Review</i> , 98:1, pp. 145-179
Fama, Eugene F. and Michael C. Jensen, 1983, "Separation of Ownership and Control," <i>Journal of Law and Economics</i> , Vol. 26 No. 2, pp. 301-325
Hilliard, James I., Laureen Regan, and Sharon Tennyson, "Chapter 25: Insurance Distribution," <i>Handbook of Insurance</i> , Springer, New York, 2013, pp. 689-727
Milgrom, Paul R. and John Roberts, <i>Economics, Organization &amp; Management</i> , Prentice-Hall, New Jersey, 1992
Petersen, Mitchell A. and Raghuram G. Rajan, 2002 "Does Distance Still Matter? The Information Revolution in Small Business Lending," <i>The Journal of Finance</i> , Vol. 57, No. 6, pp. 2533-2570
<b>Public Sources</b>
"Allstate: 1926-1995 (Sears' divestment)," available at "http://www.searsarchives.com/brands/allstate.htm"
"John Bates Clark Medal," available at "https://www.aeaweb.org/about-aea/honors-awards/bates-clark"
"Exclusive Agents Feel the Squeeze," available at "http://www.insurancejournal.com/magazines/coverstory/2003/02/10/26235.htm?print"

### Appendix C: Alternative Estimates

1. I consider two alternative versions of my analysis. In the first, I exclude California agents (those in regions 24 and 52 or a work state of California). In the second, I estimate a quadratic regression specification as an alternative to the linear regression I run in my report. I find that my conclusions are qualitatively the same in both of these alternatives.

#### A. California Excluded



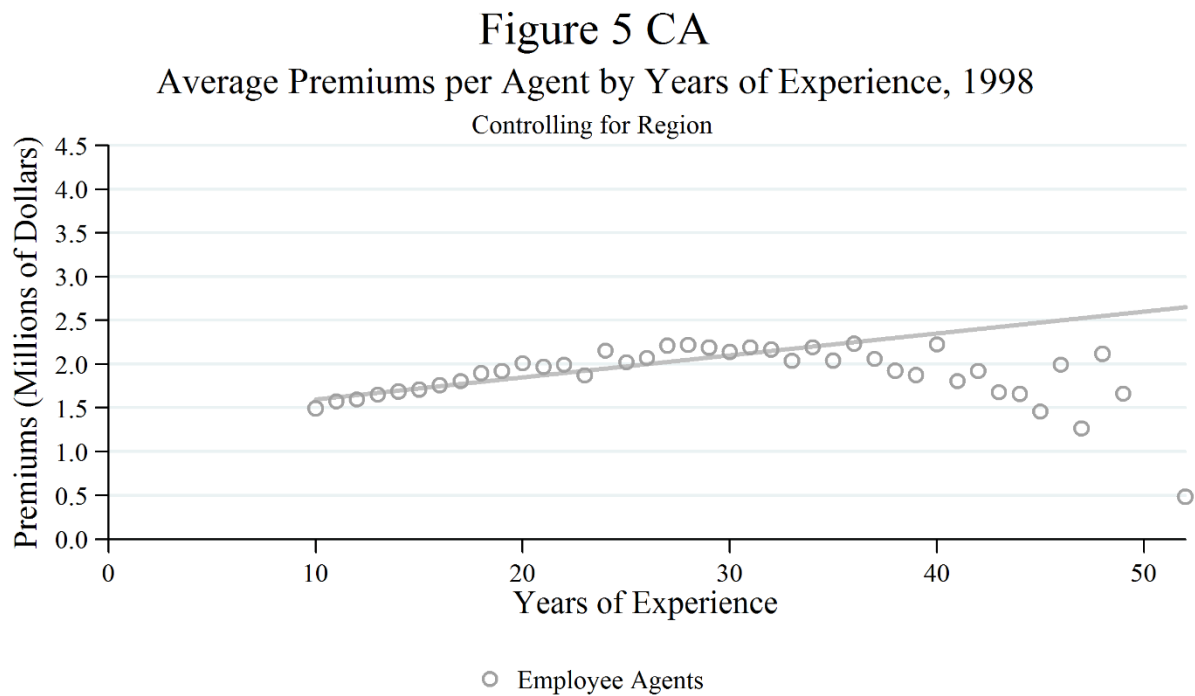
Notes:

[1] Experience is defined as 1998 - year became agent + 1.

[2] Agent classification is as of December 31, 1998.

[3] Restricted to active, non-JUA employee and exclusive agents who are not located in California, New Jersey or Canada.

Sources: HRIS, CSRP.



Notes:

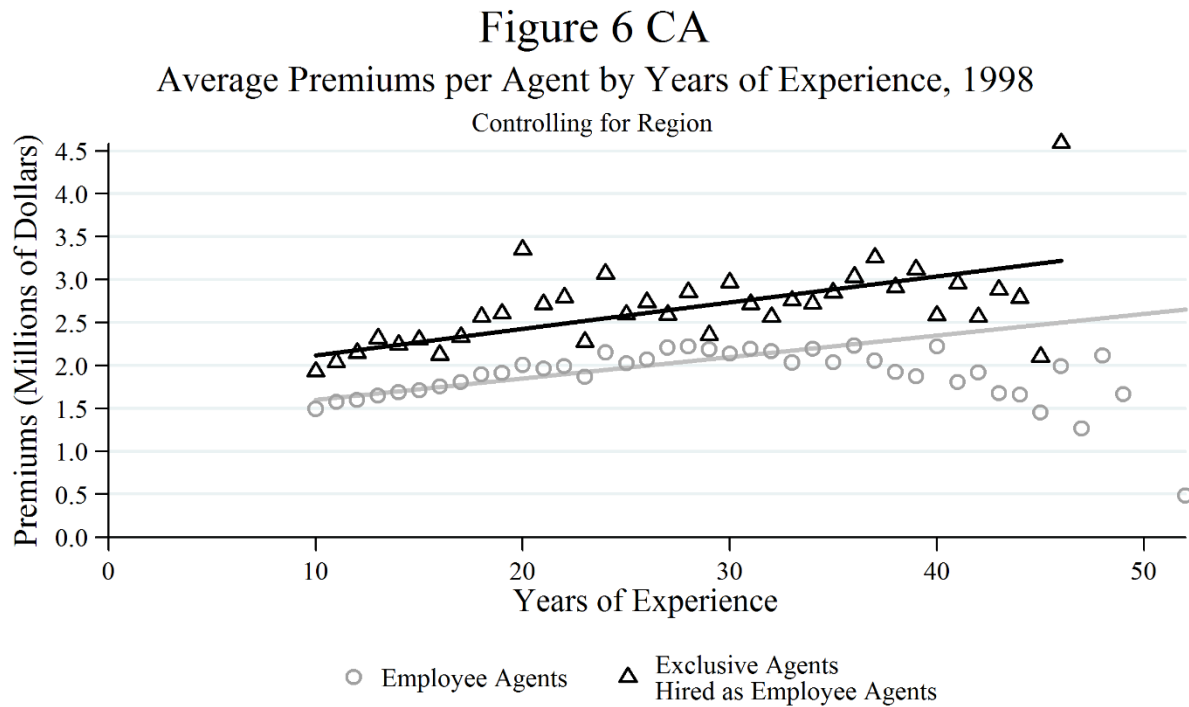
[1] Experience is defined as 1998 - year became agent + 1.

[2] Agent classification is as of December 31, 1998.

[3] Restricted to active, non-JUA employee and exclusive agents who are not located in California, New Jersey or Canada.

[4] Predicted values use New York region as baseline.

Sources: HRIS, CSRP.



## Notes:

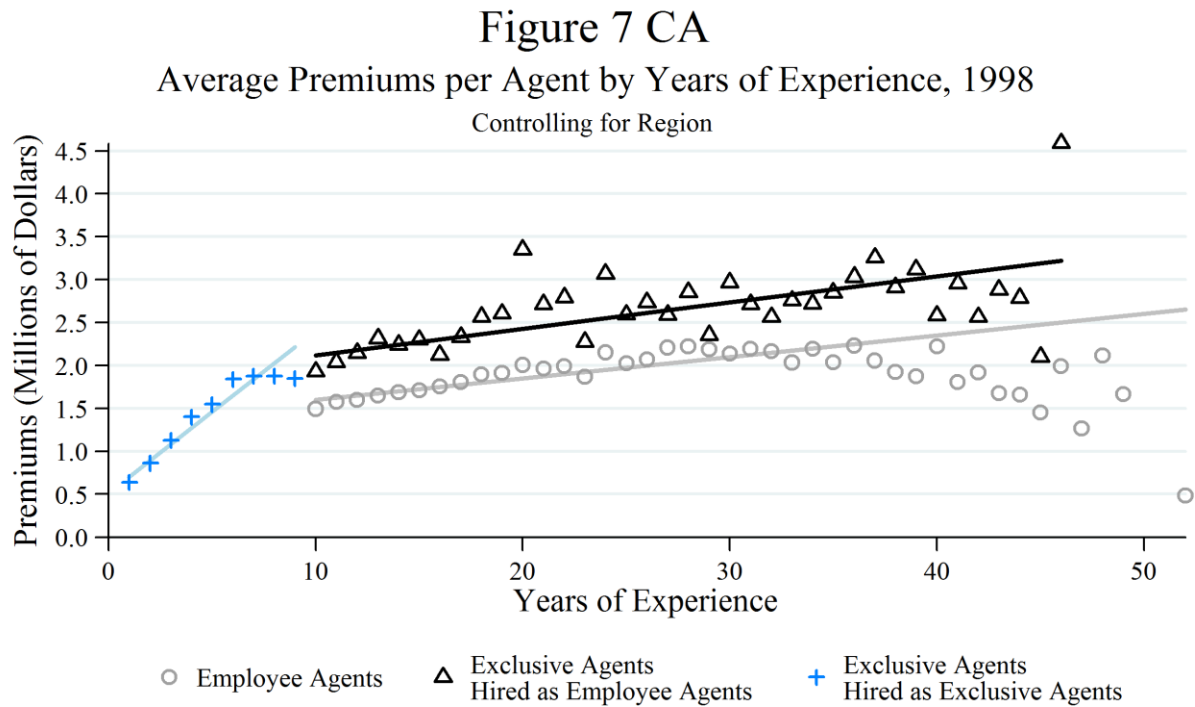
[1] Experience is defined as 1998 - year became agent + 1.

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Sources: HRIS, CSRP.



## Notes:

[1] Experience is defined as 1998 - year became agent + 1.

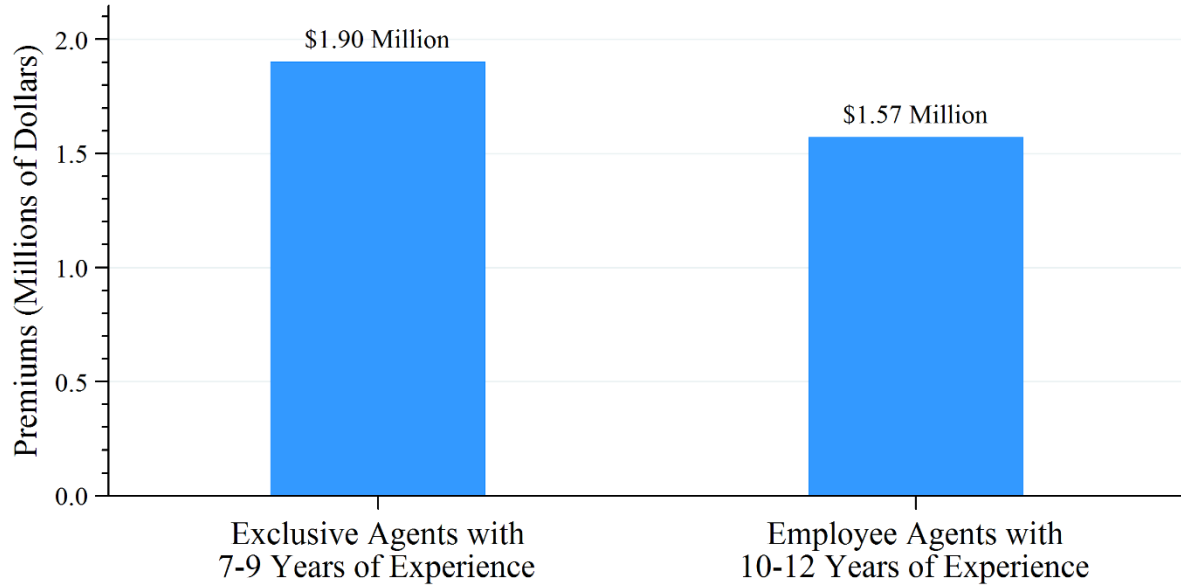
[2] Agent classification is as of December 31, 1998.

[3] Restricted to active, non-JUA employee and exclusive agents who are not located in California, New Jersey or Canada.

[4] Predicted values use New York region as baseline.

Sources: HRIS, CSRP.

**Figure 8 CA**  
**Average Premiums per Agent, 1998**  
 Controlling for Region



Notes:

[1] Experience is defined as 1998 - year became agent + 1.

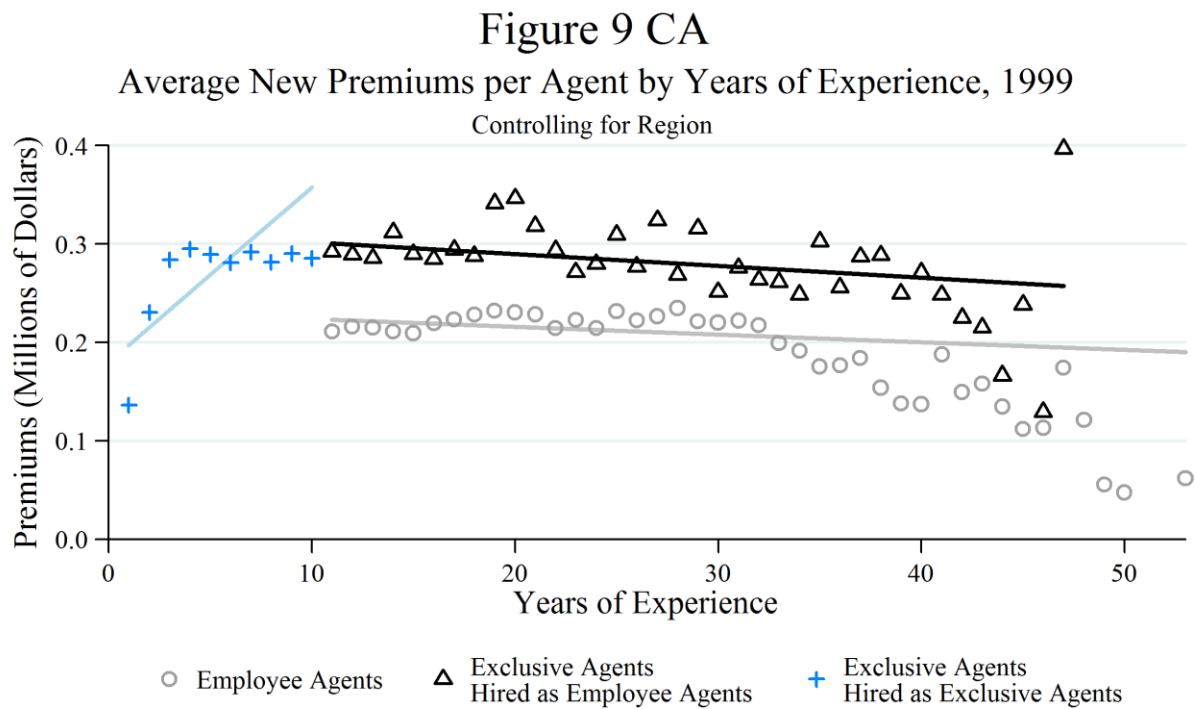
[2] Agent classification is as of December 31, 1998.

[3] Restricted to active, non-JUA employee and exclusive agents who are not located in California, New Jersey or Canada.

[4] Predicted values use New York region as baseline.

Sources: HRIS, CSRP.





## Notes:

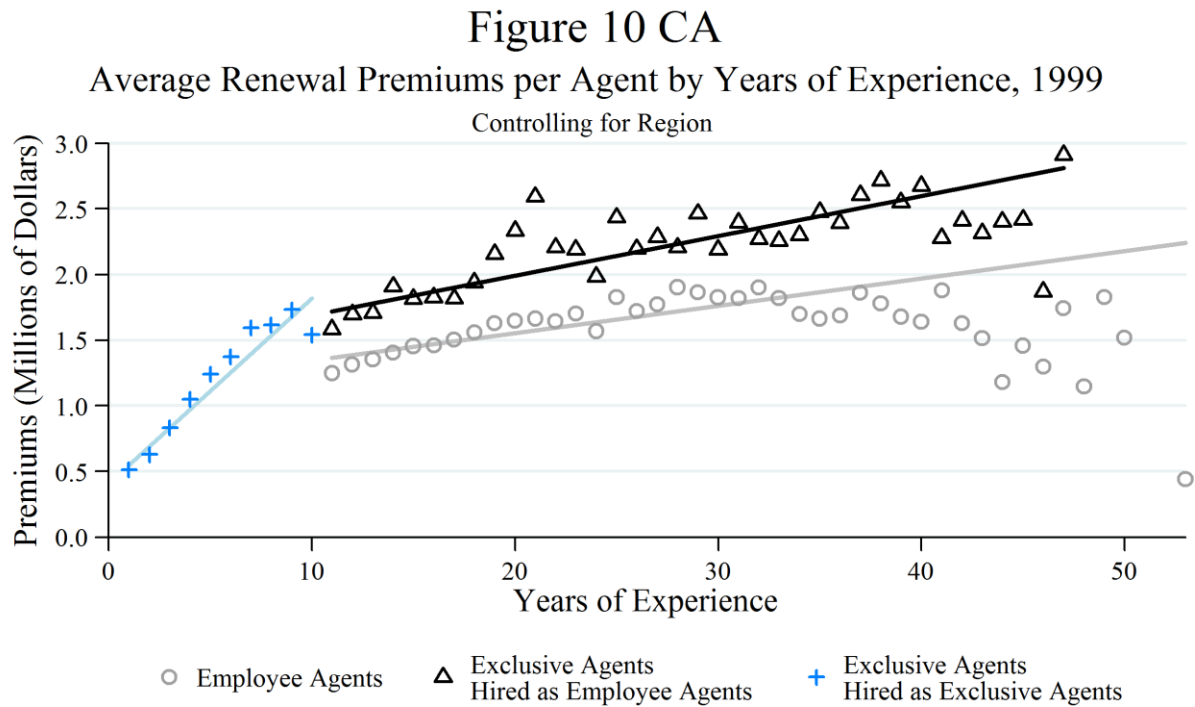
[1] Experience is defined as 1999 - year became agent + 1.

[2] Agent classification is as of December 31, 1999.

[3] Restricted to active, non-JUA employee and exclusive agents who are not located in California, New Jersey or Canada.

[4] Predicted values use New York region as baseline.

Sources: HRIS, CSRP.



## Notes:

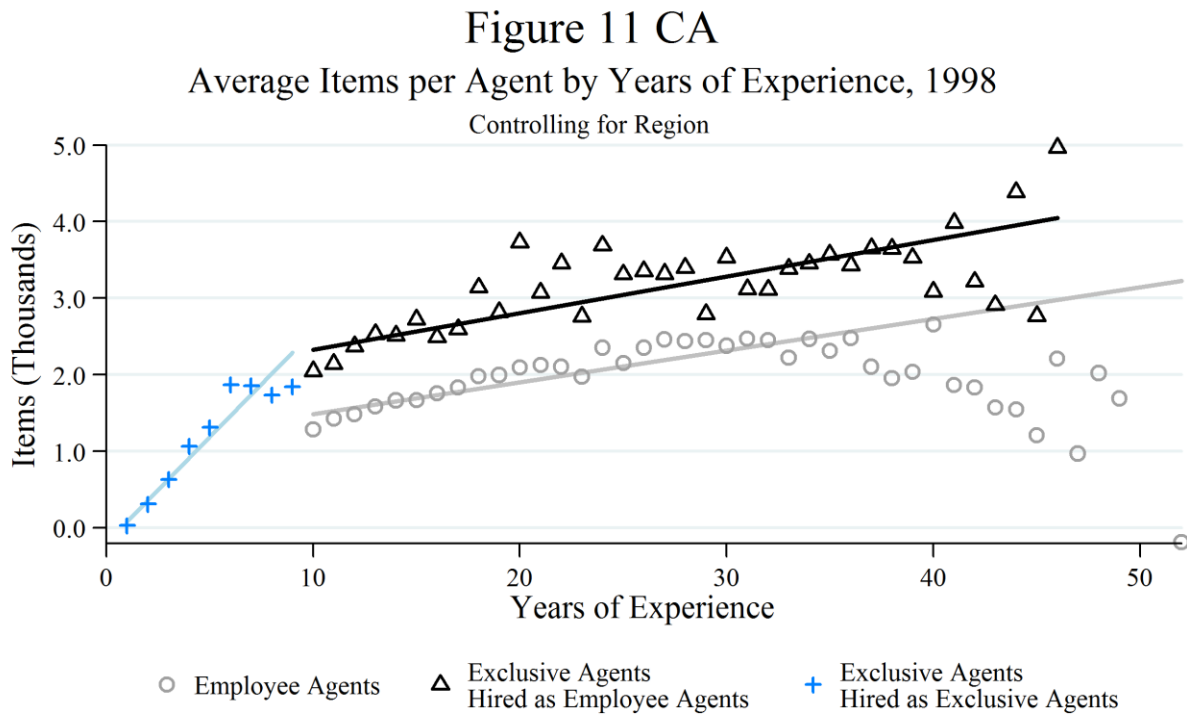
[1] Experience is defined as 1999 - year became agent + 1.

[2] Agent classification is as of December 31, 1999.

[3] Restricted to active, non-JUA employee and exclusive agents who are not located in California, New Jersey or Canada.

[4] Predicted values use New York region as baseline.

Sources: HRIS, CSRP.



## Notes:

[1] Experience is defined as 1998 - year became agent + 1.

[2] Agent classification is as of December 31, 1998.

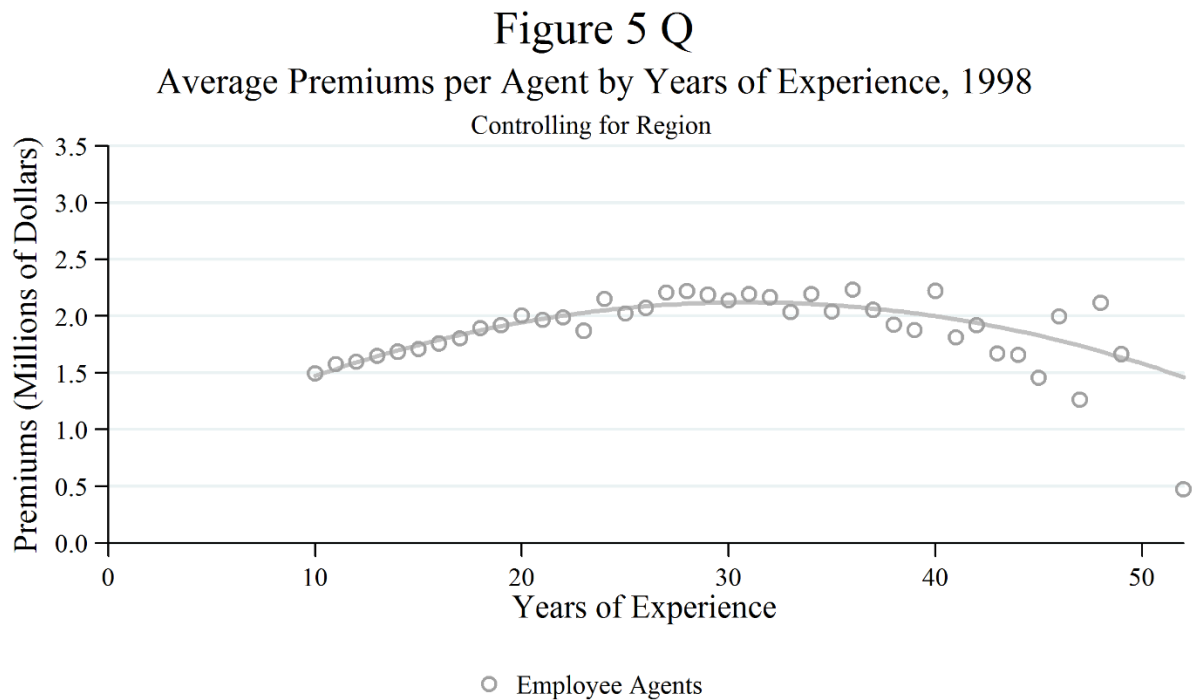
[3] Restricted to active, non-JUA employee and exclusive agents who are not located in California, New Jersey or Canada.

[4] Predicted values use New York region as baseline.

Sources: HRIS, CSRP.

**B. Quadratic**

2. The quadratic regression specification relates explanatory variables to both the level of experience and to the square of the level of experience.



Notes:

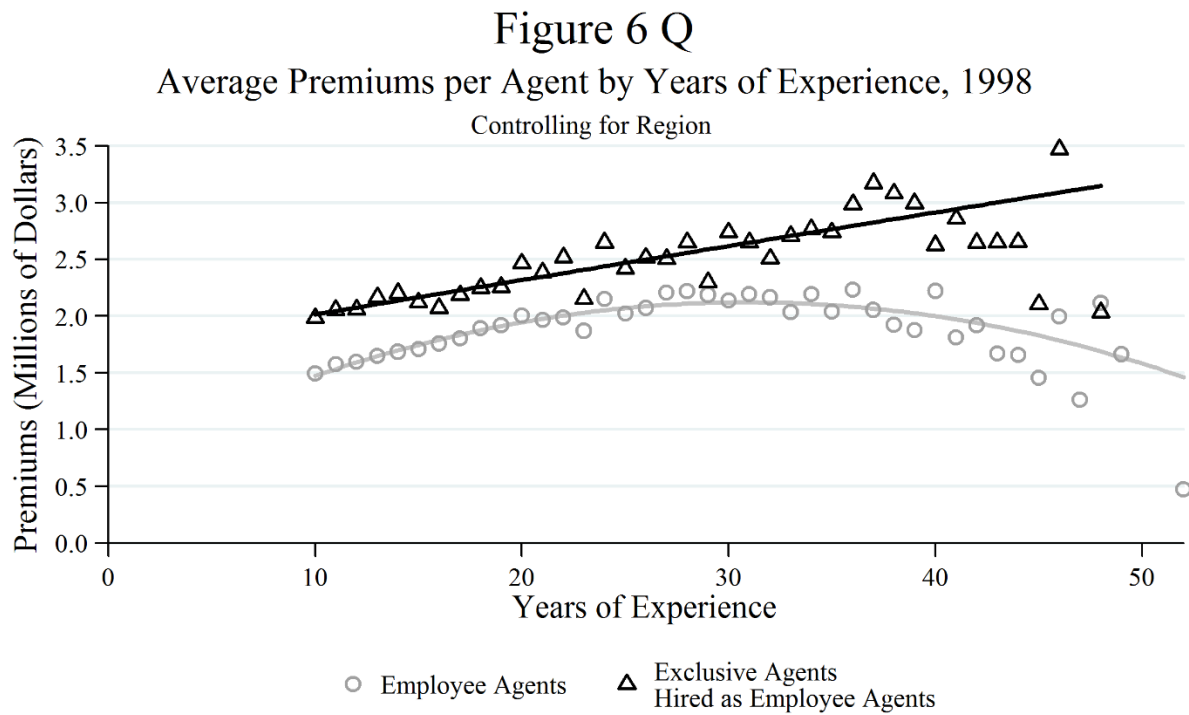
[1] Experience is defined as 1998 - year became agent + 1.

[2] Agent classification is as of December 31, 1998.

[3] Restricted to active, non-JUA employee and exclusive agents who are not located in New Jersey or Canada.

[4] Predicted values use New York region as baseline.

Sources: HRIS, CSRP.



## Notes:

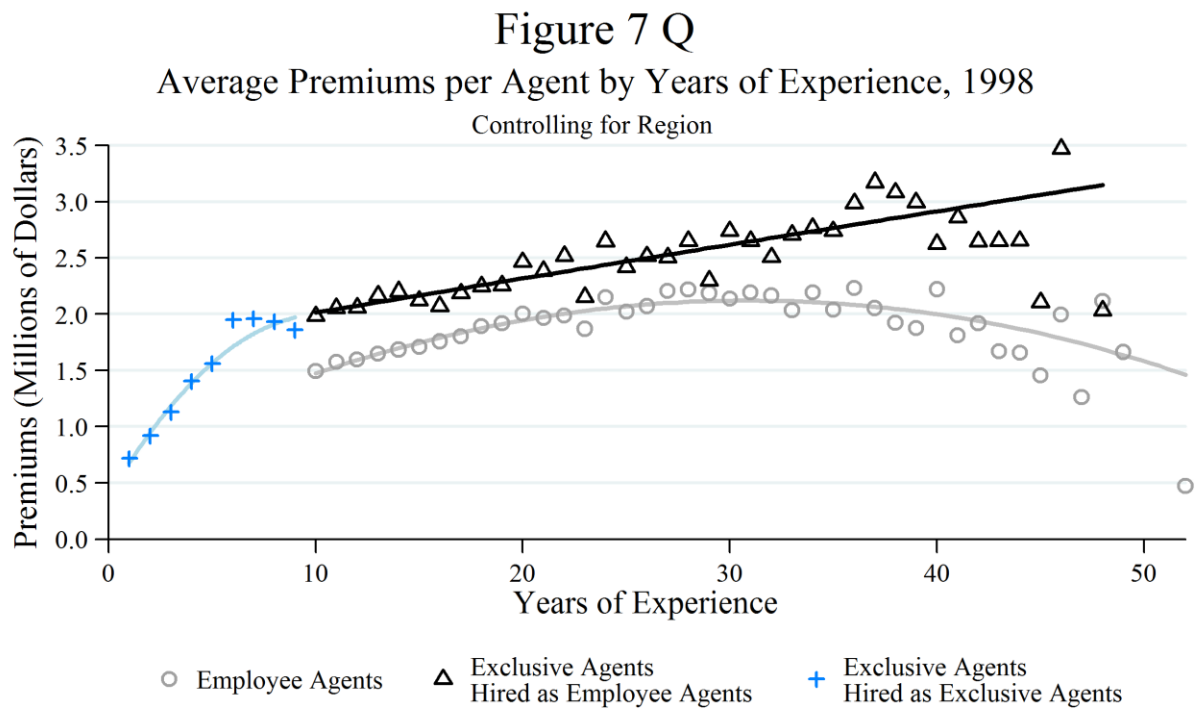
[1] Experience is defined as 1998 - year became agent + 1.

[2] Agent classification is as of December 31, 1998.

[3] Restricted to active, non-JUA employee and exclusive agents who are not located in New Jersey or Canada.

[4] Predicted values use New York region as baseline.

Sources: HRIS, CSRP.



## Notes:

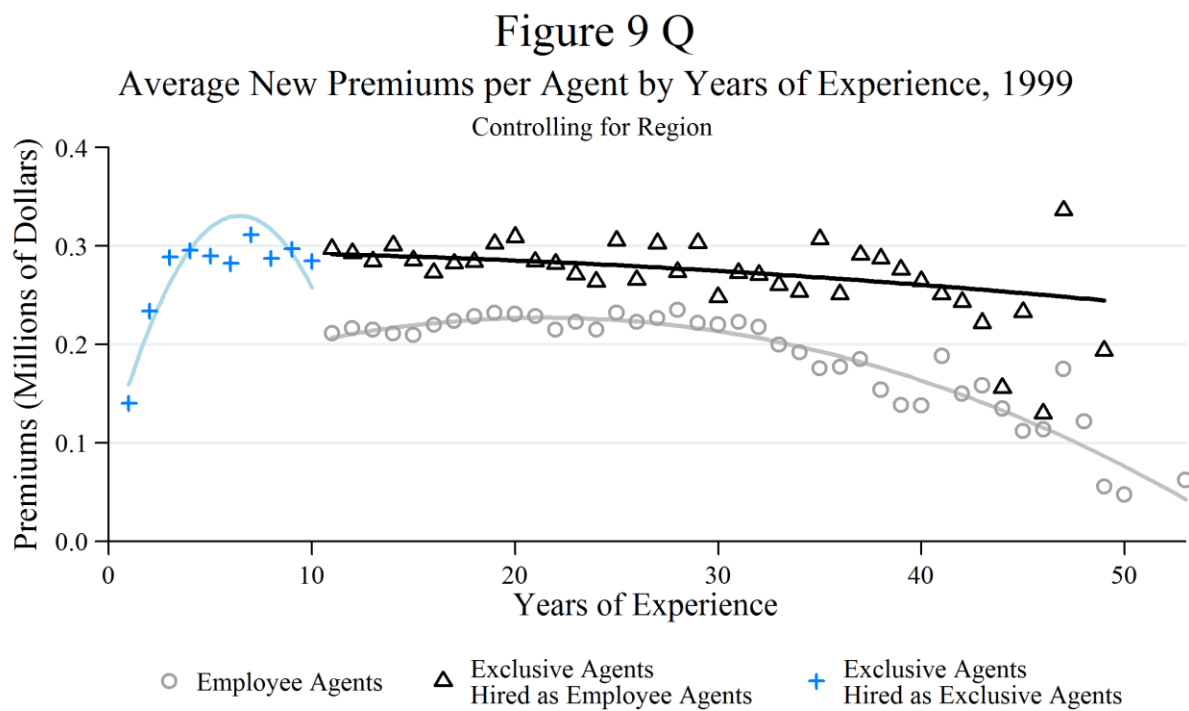
[1] Experience is defined as 1998 - year became agent + 1.

[2] Agent classification is as of December 31, 1998.

[3] Restricted to active, non-JUA employee and exclusive agents who are not located in New Jersey or Canada.

[4] Predicted values use New York region as baseline.

Sources: HRIS, CSRP.



## Notes:

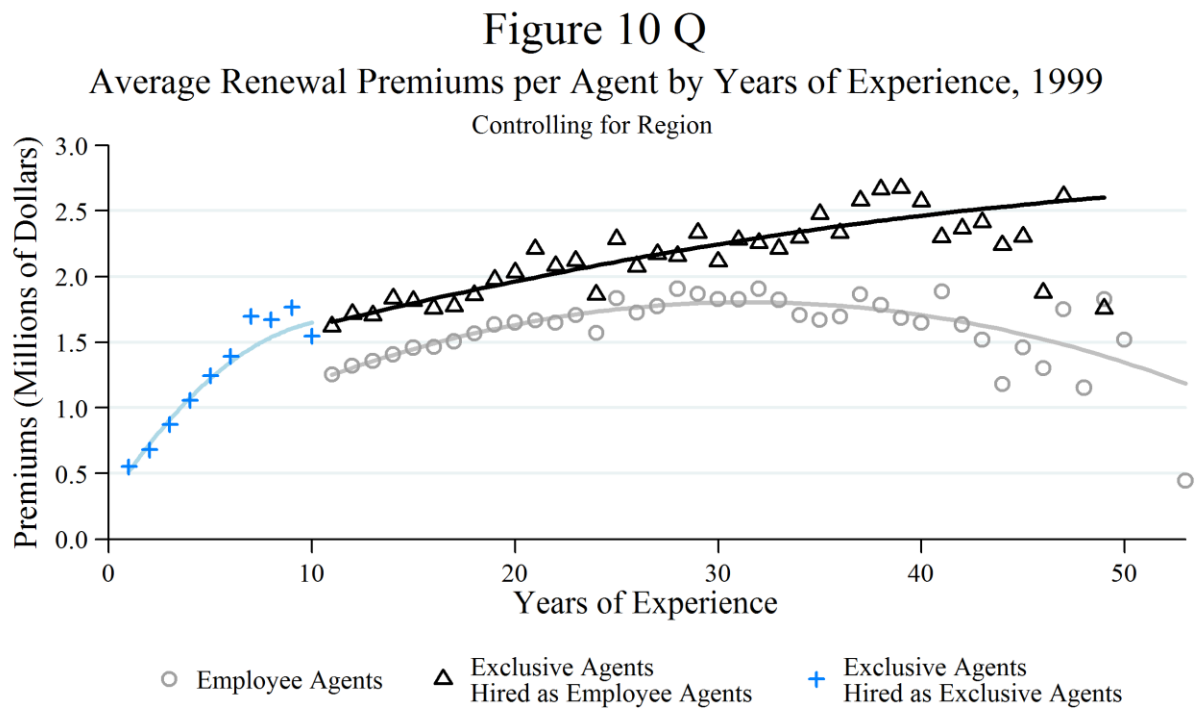
[1] Experience is defined as 1999 - year became agent + 1.

[2] Agent classification is as of December 31, 1999.

[3] Restricted to active, non-JUA employee and exclusive agents who are not located in New Jersey or Canada.

[4] Predicted values use New York region as baseline.

Sources: HRIS, CSRP.



## Notes:

[1] Experience is defined as 1999 - year became agent + 1.

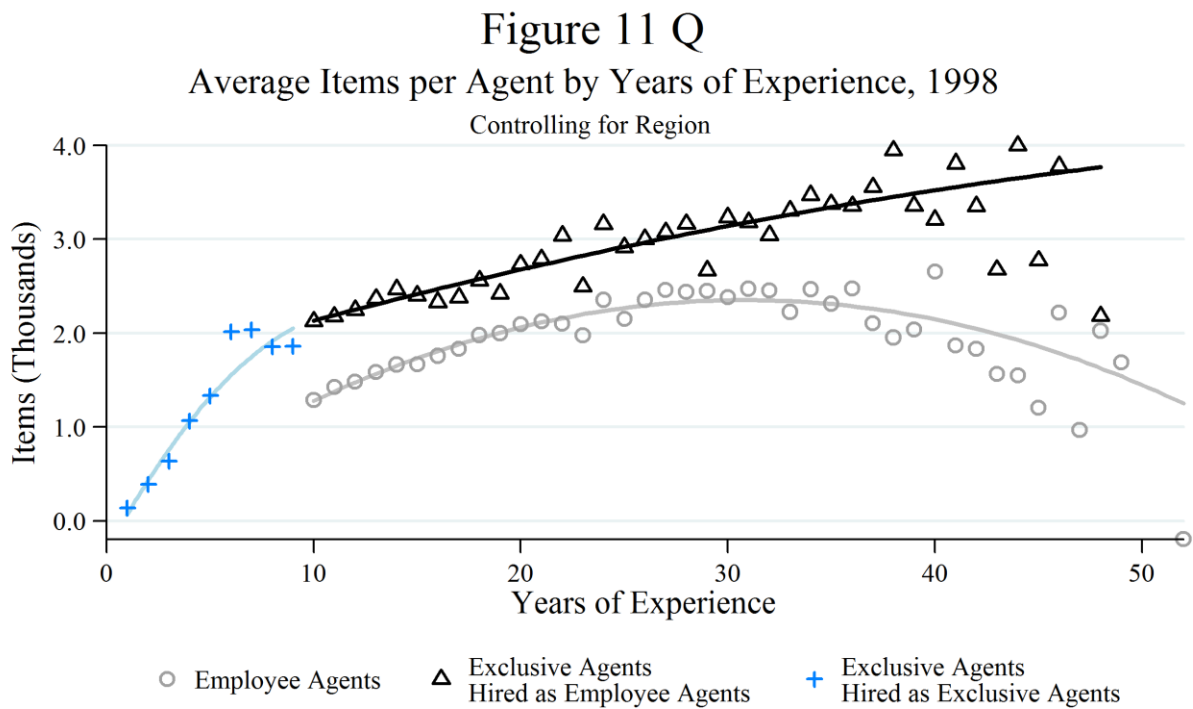
[2] Agent classification is as of December 31, 1999.

[3] Restricted to active, non-JUA employee and exclusive agents who are not located in New Jersey or Canada.

[4] Predicted values use New York region as baseline.

Sources: HRIS, CSRP.





## Notes:

[1] Experience is defined as 1998 - year became agent + 1.

[2] Agent classification is as of December 31, 1998.

[3] Restricted to active, non-JUA employee and exclusive agents who are not located in New Jersey or Canada.

[4] Predicted values use New York region as baseline.

Sources: HRIS, CSRP.